DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NOURSE, EATON & TOLMAN, PROPRIETORS.
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SIMON BROWN, EDITOR.

FRED'K HOLBROOK, } ASSOCIATE
HENRY F. FRENCH, } EDITORS.

SEPTEMBER.

To him who, in the love of nature, holds
Communion with the visible forms, she speaks
A various language. For his gayer hours
She has a voice of gladness, and a smile
And eloquence of beauty; and she glides
Into his darker musings with a mild
And gentle sympathy, but steals away
Their sharpness, ere he is aware. *Bryant.*

SEPTEMBER. It has its name from Septum, a Latin word meaning seven, because formerly the year began with March instead of January — making September the seventh month of the year.

September is called a fall month, but it seems more properly to be a connecting link between summer and fall.—Its first days are as warm and calm as those of June—not to speak of the month of June, eighteen hundred and fifty-nine, when it rained, and rained, till mankind almost feared a second deluge—but of June such as it should be—such as it was in our memories, and on the page of the poet. It is true, we miss the long, sweet twilights of early summer—and a few yellow leaves gleam from among the abundant foliage, like the first gray hairs that tell of departing youth. We can see, too, that the sun sets a little further to the south, but his beams are as ardent as ever, and as yet we have no need to put by our light garments, or to close our windows and doors against the outer world.

But presently comes the "equinoctial storm"—and the bright, brief vision of a northern summer is over! How the wind wrestles with the trees, and strips off the leaves, still green, in showers! Now we are glad to gather about the fire again, and to beguile our evenings with books and work in winter fashion. When the storm has spent its fury, it will pass by, but not again shall we look out upon a landscape having the semblance of summer. Decay is everywhere visible. Even the birds have heard a mysterious voice telling them that winter is coming, and warning them to seek a warmer climate. Man however, is not nomadic. It seems strange that, when "the world is all before them," human beings should voluntarily subject themselves to the inconveniences of extreme heat and cold. But such is man's attachment *to home*, that he will endure almost anything rather than cut loose from old associations, and wander over the world seeking a place of rest. If necessity compel him to this, he presently takes root in his new abode—and gathers his household goods about him. As one by one his friends pass away, here he buries his dead, and more than one harsh wind will blow over him, before he will voluntarily surrender the comforts and delights of a permanent home. One would think, too, that the dwellers in the most beautiful lands would have the strongest attachment to home and country,—but such is not the case. The Frenchman loves his "vine-clad" France, and the Italian his sunny Italy, but the Switzer on duty in a foreign country, must not even hear his familiar *Ranz des Vaches*, or he can no longer be restrained from returning to the hills and glaciers of his own native land. Even the Esquimaux and Icelander, were they transported to the orange-groves of the South, would sigh for the huts where they had burrowed with wife and children, and perhaps said wife and children are just as beautiful in their eyes, clad in robes of bear-skin, as those of their more luxurious neighbors in their silks and muslins. Well, "every man to his taste."

Let us be thankful that we are born at least among the appliances of civilization—that if it is our destiny, in a general way, to put out our branches very near the spot where we first took root, let us rejoice that this spot did not happen to be the summit of an iceberg. Yet in this curious ordering of nature, we see a wise purpose. Were it otherwise, the tendency would undoubtedly be toward the temperate portions of the globe, giving them an undue population, while the rest of the world would be thinned of its inhabitants. One sees at a glance how the arts and sciences would suffer, and how many comforts we should be deprived of, which flow directly from an intercourse with people of different climates, habits and customs.

Doubtless some adventurous Dr. Kane would still pay a visit to the North Pole, but if there were no human beings in that region, native to the soil, his sojourn would be likely to be more desolate than any explorations we have yet heard of. But, to use another's language, "Where no trees grow, where no vegetables come to maturity, and gales from every quarter of the Icy Sea beat the last faint life out of nature, men will still persist in living, in apparent defiance of all natural laws."

"Well is it for us, that there are people whose ideal of life consists merely in possessing a sufficient quantity of whale oil, blubber and seal skins, with a warm den underground. To the torrid zones we are still more indebted. Our finest fruits, our precious woods, are all brought from countries about the equator.

But we have got upon a subject involving too many considerations to be fully dealt with here. One inference strikes us,—that what at a first glance seems mere accident, will be found, on a closer view of the subject, to be the result of a special design. It is so in this case, and we believe it will always be found to be so, where our own limited faculties do not stand in the way of full investigation. So may we always

"Look from Nature, up to Nature's God."

COAL ASHES AS A MANURE.

But few experiments have been made by American farmers, says a writer, to test the fertilizing properties of coal ashes. While we are importing guano and other manures from foreign lands in enormous quantities, and at great expense, it may be well to employ substances nearer home, which are now neglected and cast aside as worthless. Thousands of tons of ashes might be obtained in cities where coal is extensively employed for fuel, which, when applied to the soil, would doubtless greatly augment its productive powers. It is stated in "Faulkner's Farmers' Manual," an English publication on manures, that coal ashes contain sulphate of lime, with some potash and soda, all of which are known, when separately applied, to produce a good effect on clover crops, and to constitute an important part of the food of all grasses.

The following experiment by an English farmer, may shed some light on the subject: The ground selected contained three perches (rods) of clover; the first had no manure, and produced thirty-eight pounds when cut in full head; the second, where four quarts of sifted coal ashes, which had not been exposed to the weather, were applied, the produce was fifty pounds; on the third perch, one quart of plaster was sown, and the crop weighed fifty-four pounds. It will be seen that the ashes increased the clover nearly one-quarter above that on which no manure was applied, which goes to prove that this substance is a valuable fertilizer. Coal is said to be of vegatable origin; therefore, we can see no reason why its ashes should not contain the food of plants. Experiments on various soils and crops might be made by any farmer at a small expense, as coal is employed as fuel in nearly every town.—*Ex.*

FARM DRAINAGE.

Everybody has heard of F. O. J. Smith, as one of the pioneers in telegraphing, as a politician who generally prophesies correctly, and a thorough going business man.

It may not be so generally known that Mr. Smith is, also, always interested in agricultural affairs, residing upon one of the most picturesque and beautiful estates in New England, known as *Forest Home*, near Portland, Me., where he amuses his leisure hours with his thorough-bred stock and the high culture of his broad acres. Thus he speaks in the *Eastern Argus* of Drainage, and Judge French's treatise on that subject.

A BOOK FOR FARMERS.

Of all departments of agricultural science, that which teaches the value, and best methods of THOROUGH DRAINAGE of lands for cultivation, has no rival in practical usefulness. No other is marked more distinctly in its results, when listened to and properly obeyed in its teachings. It is the base line of all wise agricultural improvement upon a major part of all lands on this continent.

Ditching grounds is the rude, superficial and temporary remedy of a positive evil.

Drainage is the perfection of ditching, reduced to a system of lasting effects.

One is the scratching of the scab which appears on the surface, and for temporary relief; while the other is the cure of the disease which produces the scab.

That farmer has a good look towards advantages, who ditches his grounds extensively.

But that farmer marches far in advance of the first, who appreciates and executes a well studied system of drainage.

In this country quite too little importance has been attached by farmers far in general to either ditching or drainage; although many have unstood and practised them well.

Most men have been inclined to seek lands for cultivation that seemed to require neither ditching or drainage. And yet, the most valuable of all lands for improvement and when improved, are those which require these agencies, and draining in particular, and extensively. And for the reasons that they are susceptible, under such system, of commanding, with most certainty of all lands, all the fertilizing elements of nature, and of using them in exactly the best proportions, and at the right times, and of throwing off the redundancies of each, as may be best for the growth, or support, or protection of the desired crop.

As a marked and instructive illustration of the effects of drainage, I recollect of noting in my readings some years since, the following statements from an English paper:

"There is a field on the estate of the Earl of Leicester, at Longford, in this country, which some years ago was occupied by Mr. John Sherrat, and brought forth rushes in such abundance, that the occupier gave leave to any body to carry them away, who would be at the trouble to mow them. Three years ago, the field was drained, under the direction of Mr. T. Harper Foster, and this year, we are told, the present occupant, Mr. T. Robinson, has cut *three tons an acre* of as nice herbage as ever grew."

Judge HENRY F. FRENCH, of New Hampshire, through Messrs. A. & O. MOORE, Agricultural Book Publishers, New York City, has produced the most complete, instructive, readable and entertaining manual upon FARM DRAINAGE that has been given to this reading and progressive world.

It contains a greater variety of details, of clear and comprehensive, practical and practised results, of rules, and of reasons of rules, and of modes and agencies to be employed in this department of agricultural economy, than all other books extant, and substantially comprehending all other books on the subject.

As the incidents of *thorough drainage*, and proper to be understood, the legal rights of flowage and drainage, pertaining to land owners —average annual rain falls; snows, dews, frosts, composition, filtration, absorption, and their affinities, are discussed and illustrated in a style alike entertaining and instructive, and more than one hundred engravings are interspersed to make clear to the eye whatever the pen might have failed to render clear to the commonest understanding.

And, what is especially praiseworthy in an author, he has furnished not only an elaborate table of contents, but a capitally minute index, without which the best of books is only as a lighted candle under a half-bushel measure.

Judge FRENCH is himself a practical farmer as well as jurist, and a constant writer on the theories and practice of agriculture, being one of the editors of the *New England Farmer*.

Besides personal practice and extensive reading and writing on this science, he has treated himself to extensive personal observation of the practice of others, in both our own and foreign lands. He visited Europe a year since with a special reference to his own improvement in his study and practice of agriculture.

With a mind naturally active, vigorous, searching and discriminating—with an ambition to render himself personally useful to others, concurrently with a rational enjoyment of life—with an acquisition of advantages in education and society tending directly to the success of these endowments and personal aims—it would be strange if in attempting to produce a book ranging within the chosen field of his chiefest labors he should have failed.

He has not failed. And no man who obtains the book and reads it will feel otherwise than rejoiced in the possession of it. No man owning an acre of ground should be without a copy of it. It is the book for distribution by our Agricultural Societies as premiums at their shows. Even the housewife, who is privileged to learn by study in doors, what the prudent husbandman, and his sons and workmen, ought to understand how best to execute out-doors, will find this volume both readable and interesting in its lively style and manifold details. And she, too, may be left to the struggles of a desolate widowhood, in the management of a heritage, until her youthful sons can release her of the painful responsibility, and until then she will need to know how to instruct those sons in the judicious modes which the father would have pursued if present, first with this field and then with that, to secure the greatest improvement and derive from it the greatest advantage. In all that relates to redeeming lands from the waste of a superabundance of waters, Judge FRENCH'S book will be found a faithful counsellor in her solitude and cares.

It is seldom I find leisure, or feel an inclination, to praise a book. It is generally labor enough to read them thoroughly. But I deem this production of Judge FRENCH so deserving, and so calculated to be useful to the agricultural community, I hesitate not to risk all the censures which any intelligent person who may procure and carefully read it, may feel disposed to bestow upon me, for commending it to him.

FRANCES O. J. SMITH.

Forest Home, Westbrook, July 27, 1859.

STATE FAIRS FOR 1859.

We publish below a list of the various State and Provincial Fairs to be holden the coming fall, as nearly perfect as we can make it from the information in our possession.

STATE.	PLACE.	TIME.
Alabama	Montgomery	November 15—18
California		Sept. 27—Oct. 6.
Canada West	Kingston	September 27—30.
Connecticut	New Haven	October 11—14.
Illinois	Freeport	September 5—9.
Indiana	New Albany	Sept. 26—Oct 1.
Iowa	Oscaloosa	September 27—30.
Kentucky	Lexington	September 13—17.
Maine	Augusta	September 20—23.
Maryland	Frederick City	October 25—28.
Michigan	Detroit	October 4—7.
New Hampshire	Dover	October 5—7.
New Jersey	Elizabeth	September 13—16.
New York	Albany	October 4—7.
Ohio	Zanesville	September 20—23.
Pennsylvania	Philadelphia	September 27—30.
Southern Central Agricultural Society,	Atalanta, Ga.	October 24—24.
St. Louis Agricultural and Mechanical Association,	St. Louis	Sept. 26—Oct. 1.
Tennessee	Nashville	October 5—7.
United States	Chicago	September 12—17.
Vermont	Burlington	September 13—16
Wisconsin	Milwaukie	September 26—34

For the New England Farmer.

AGRICULTURAL KNOWLEDGE.

MR. EDITOR:—It appears to me that the means of obtaining agricultural knowledge is not so easy as it ought to be. The State money which is distributed annually among the several county societies, can and ought to be so managed that knowledge will accrue from it to the great mass of the farming interests of the State, instead of doling it out in premiums, to a fortunate few.

I have recently been perusing the pages of the "Transactions of the Massachusetts Society for Promoting Agriculture," which is a new series just issued, and I find that from its foundation, its managers have been zealous in getting agricultural knowledge in some form or other before the people; they resorted to such expedients as were available, which were widely different from the collection of such matter and resources for its dissemination now. It appears if there was that interest taken in the diffusion of agricultural knowledge at the present time, that there has been formerly, it would materially change the aspect of many rural homes. "Knowledge is power." Its effects have produced wonderful changes. May it be applied to the important science of agriculture in such a manner, as to give it a new impetus. It may be said, we have a large number of agricultural works and newspapers; this is all very well, but it does not suffice. We want a system by which the *community* may be drawn together to have a talk, or hear occasionally a lecture on agriculture.

Winchester, Feb. 8, 1859. D. W. J.

REMARKS.—Certainly. We have given premiums a fair trial—let us now try something else. When you have got farmers to talk and compare notes among themselves, in public gatherings, you will at once inspire them with a new love and interest in their calling; and then they are in a condition to receive benefit from lectures, books, and the discussions of more scientific men.

For the New England Farmer.

UNDERDRAINING---MOWING MACHINES.

MR. EDITOR:—I this morning visited the farm of Mr. Franklin Alley, of Marblehead, who, wherever he is known, is regarded as good authority as any other man, on subjects to which his attention has been given. My particular object was to witness the improvements he has made by underdraining. For many years the farm he occupies has been known as one of the most productive hay farms in the county. He now uses about half of it for the growing of vegetables. On this he has laid about 3000 feet of underdrains—on an average about 2½ feet deep. By so doing, he thinks his crops have been doubled. My attention was first called to this, by the extraordinary crop grown on his land, an account of which was given in our transactions. Mr. Alley is a practical farmer, without pretensions, *no mistake*. While looking at his lands, I saw about two acres of grass that had been cut with the Buckeye Mower, moved by two horses. I asked him which he preferred, a single or two-horse mower. He said he would not take a one-horse implement, and work it through the season, if any one would give it to him. That one horse was not adequate to the performance of this work. This so entirely accorded with the impression that I had formed, that I was pleased to hear it; and now mention it for the information of those who are willing to learn the best mode of cutting grass—of which there is at present a prospect of so great an abundance. I do not pretend to be an instructer myself, any further than I learn from good authority.

J. W. PROCTOR.

South Danvers, June 30, 1859.

LOOKING IN THE WINE CUP.

"Look not thou upon the wine cup when it is red, when it giveth his color in the cup, when it moveth itself aright. At the last it biteth like a serpent and stingeth like an adder."—*Proverbs* 23: 31, 32.

Hiram Cox, M. D., of Cincinnati, has made the following statement:

"I analyzed a lot of liquors for some conscientious gentlemen of our own city, who would not permit me to take samples to my office, but insisted upon my bringing my chemicals and apparatus to their store, that they might see the operation. I accordingly repaired to their store, and analyzed samples of sixteen different lots. Among them were Port wine, Sherry wine and Madeira wine. The wines *had not one drop of the juice of the grape.* The basis of the Port wine was diluted sulphuric acid, colored with elderberry juice, with alum, sugar, and neutral spirits.

The basis of the Sherry wine was a sort of pale malt, sulphuric acid, from the bitter almond oil, with a per centage of alcoholic spirits from brandy.

The basis of the Madeira was a decoction of hops with sulphuric acid, honey, spirits of Jamaica rum, &c. The same week, after analyzing the above, and exhibiting the quality and character of the liquor to the proprietors, a sexton of one of our churches informed me he had purchased a gallon of the above Port wine, to be used in his church on the next Sunday for sacramental purposes, and that, for this mixture of sulphuric acid, rum and elderberry juice, he paid $2,75 a gallon."

Prof. C. A. Lee, of New York, makes the following statement:

"A cheap Madeira is made here, by extracting the oils from common whisky, and passing it through carbon. There are immense establishments in this city where the whisky is thus turned into wine; in some of those devoted to this branch of business, the whisky is rolled in in the evening, but the wine goes out in the broad daylight, ready to defy the closest inspection."

Prof. Lee further states, "The trade in empty wine casks in this city, (N. Y.) with the Custom House mark and certificate, is immense; the same casks being replenished again and again, and always accompanied by that infallible test of genuineness, the Custom House certificate. I have heard of a pipe being sold for twelve dollars."

"There is in the neighborhood of New York an extensive manufactory of wine casks, which are made so closely to imitate the foreign, as to

deceive experienced dealers. The Custom House marks are easily counterfeited, and certificates are never wanting."

"I have heard," says Dr. Lee, "dealers relate instances in which extensive stores had been filled with these artificial wines, and when merchants from the country have asked for genuine wines, these have been sold them as such, with assurances that there could be no doubt of their purity."

The late Rev. T. P. Hunt, of Wyoming, Penn., wrote: "While I lectured in Philadelphia, I became acquainted with a man who was engaged extensively in making wines, brandy, &c. Through my influence he abandoned the horrid traffic. He informed me, that in order to produce the "nutty flavor" for which Madeira was so much admired, he put a bag of cockroaches into the liquor and let it remain there until the cockroaches were dissolved. I have been informed by several that this is no uncommon practice. If any wine drinker doubts it, he can soon settle the question by experiment. Cockroaches are plenty, and many much more nauseous and poisonous substances are known to be employed by the makers and venders of intoxicating drinks. I would give you the name of the person who gave the recipe for using cockroaches, but he gave it in confidence, and is now occupying a much more moral and useful station than that of poisoning his customers."

Says President Nott, in his admirable lectures, "I had a friend who had been himself a wine dealer, and having read the startling statements, some time since made public, in relation to the brewing of wines, and the adulteration of other liquors generally, I inquired of that friend as to the verity of these statements. His reply was: 'God forgive what has passed in my own cellar, but the statements made are true—all true, I assure you.'"

"That friend," says President Nott, "has since gone to his last account, as have doubtless many of those whose days on earth were shortened by poiso ns he dispensed. But I still remember, and shall long remember, both the terms and the tone of that laconic answer, 'The statements made are true—all true, I assure you.'"

"But not on the evidence of that friend does the evidence of these frauds alone depend. Another friend informed me that in examining, as an assignee, the papers of a house in that city, which had dealt in wine, and which had stopped payment, he found evidence of the purchase, during the preceding year, of hundreds of casks of cider, but none of wine; and yet it was not cider, but wine, which had been supposed to have been dealt out by that house to its confiding customers."—*Michigan Farmer.*

WESTFIELD ACADEMY.—We notice this institution with pleasure because it has an Agricultural Department. The late STEPHEN HARRISON, (we will cherish his memory,) of Westfield, bequeathed $5000 for endowing this department, and the town, with great good sense, contributed an additional sum of $5000.

The course of instruction in this department, we learn, is eminently practical, and includes almost every topic connected with agriculture and horticulture. We have heretofore spoken of the Institution at Bernardston, Mass., conducted upon similar principles. These are among the encouraging indications of the progress of agriculture. The course of study at Westfield includes,

Recitations in Scientific Agriculture.
Agricultural Chemistry.
Special Topics in Chemistry and Agriculture.
Theory of Fertilizers.
Discussions of Questions relative to Crops, Modes of Culture, Agricultural Implements, etc.
Feeding and Treatment of Stock.
Directions for conducting Experiments in Agriculture.
Discussion of Agricultural Statistics.
Principles of Land Surveying.
Horticulture.
Fruits and Modes of Culture.
General Principles of Taste, with Applications to Landscape Gardening and Rural Architecture.

JOSEPH B. HOLLAND, M. A., Principal.

WORCESTER AGRICULTURAL SOCIETY.

FORTIETH ANNUAL REPORT.

This report contains the award of premiums, statements of committees and competitors, the by-laws of the society, and a list of the members from its origin. The premiums awarded amounted to $979 50. There appears to have been a fine show of neat stock, and this is always expected in Worcester, for there is no finer stock to be found in the State, than in Worcester county. Horses were obviously a prominent feature at the exhibition, and nearly one-third of the whole amount of premiums awarded was for horses. Two premiums of $50 each were given to one person for two fast horses! We notice, also, that $331 were received for the use of the track. This we suppose was for a purpose not contemplated in the act incorporating the society, or for any thing that would tend to promote the art of agriculture. We presume, however, that the operations on the track were not carried on under the immediate supervision and patronage of the society, but only with its knowledge and consent, and the society, must therefore share in whatever credit and honor may be attached to them.

We notice that the society has a heavy debt of nearly $16,000, the interest on which absorbs a large portion of its income. We fear it will be a long time before the profit derived from the track will pay this debt. We believe the true policy of all our societies is to invest as little as may be in real estate, and keep their funds so invested that they will yield an annual income, which may be used for the legitimate purposes of the organization. When money is invested in buildings, insurance must be paid, and they constantly require repairs, which absorb no small portion of the income of the society. A cheap, substantial hall, that will accommodate the exhibition, when suitable accommodations cannot be procured in the immediate neighborhood, is justi-

fiable. The purchase of ground and the erection of buildings, fixes the annual meeting at the place where the estate is located, and however gratifying it may be to the people in the immediate vicinity, leads to the division of county societies into district societies. This has been the case in Worcester and Middlesex, and will be the case in other counties, whereas, if the annual exhibitions could be held alternately at two or three towns in the county, the county societies might continue unbroken, and have strength and friends enough to devise and execute many useful and efficient plans for the promotion of agriculture, which cannot be accomplished under the existing order of things.

EXTRACTS AND REPLIES.

WHITE SPECKS IN BUTTER.

I noticed in the *Farmer* of June 11, an article written by Henry Holmes, on "White Specks in Butter." I never manufactured or sold churns, but have used churns more than forty years; I have had white specks in my butter, but it was not caused by uneven churning, or by scraping down the cream while churning. The cream should be put down as soon as it thickens, and before the buttermilk appears, or you lose the cream, but it will not cause white specks in the butter; dried cream is the cause of white specks. It is dried in summer by a current of air blowing across the pans. Since I altered my milk-room, and put on a blind to prevent the wind from blowing directly across the pans, I have got rid of the dried cream. If your cream is dried, you can soak it in the cream-pot and prevent the specks in the butter; it should be soaked twenty-four hours before churning, and stirred well, and if thick, some milk added to soak it; but if you churn it as soon as skimmed, in Fyler's churn, or any other churn, you will have white specks in the butter.

AN OLD FARMER.

Montpelier, Vt., July 4, 1859.

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A YOUNG NON-BEARING ORCHARD.

I have a young and thrifty orchard, from which I receive little or no fruit. The trees are about 12 inches in diameter, and in a rich soil, facing the sun; the ground has been cultivated every year and a crop taken off, since the trees were set, 12 years ago. As trees in good bearing yield, I have enough for one hundred barrels of apples. What can be done to procure a crop of apples? Will you, or some of your correspondents, answer this question? E.

REMARKS.—Hard to tell you. Let it go to grass two or three years, clover, and then plow it again shallow, and see what the result will be.

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MR. REED AND HIS BUGS.

In the summer of 1858, my attention was arrested by the grand microscopic discovery made by Mr. Lyman Reed, of Baltimore, of the bug that destroyed the potato. I received from him notice of his patent right for the remedy, and an earnest solicitation to participate in the benefit, simply by remitting a small sum in advance—but time passed on, and the bugs with it, and I have heard nothing of them since. I have a strong suspicion that the bug discovered was of the humbug order; whether it will be found in the latest work on insects, I am not able to say. I am in hopes the Board of Agriculture, with their entomologist from Christian Hill, in Andover, will be able to tell us about it, when they next publish a treatise on onion maggots. ***

REMARKS.—We know Mr. Reed, and believe him to be an ardent and sincere inquirer after truth.

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EGGS OF INSECTS ON GRAPE VINES.

I herewith send you by a friend, a small slip from my grape vine, cut in March last. It contains, as you will perceive, either an insect, or the larvæ of some insect. My vines have, for some years, been nearly covered with it. When plump and fresh, it presents a disgusting appearance; has the small red insect called lady bug anything to do with it? Will you please inform me through your paper what it is, or what comes from it? D.

Lynn, July, 1859.

REMARKS.—We are unable to shed any light upon the inquiries of our correspondent. Several persons have examined the piece of vine sent, but without giving us any knowledge of what occasions its singular appearance.

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TO KILL COCKROACHES.

In your July number of the *Farmer* "A Subscriber" asks what will exterminate cockroaches. In reply—Equal parts of dry red lead and sugar, well mixed, is a certain and sure exterminator of cockroaches, black and red ants, and other like pests. A READER.

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TO "OAK HILL"—PINES AND DUCKS.

For the information of "Oak Hill," please say the best time for transplanting the pine, spruce, &c., is from the first to the middle of June. The same care is needful in transplanting them as in other trees.

He will obtain the Muscovy ducks he inquires for by sending four dollars for the three to

South Wilbraham, Mass. NELSON MOWRY.

—

GRASSES.

Will you please give me the names of the enclosed grasses? E. T. WHEELER.

Berlin, Mass., 1859.

REMARKS.—The parcel marked "No. 1," is the true Fowl Meadow Grass. "No. 2," is the Italian Rye Grass. "No. 3," is the Blue Joint. "No. 4," is a grass entirely unknown to us.

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GOOD OPINIONS.

Thanks to "O. P. L," Pembroke, Mass., for the good opinions he expresses for the *Farmer*.

For the New England Farmer.

CORN AND CORN FODDER.

In the monthly *Farmer* for March is an article on "Corn and Corn Stalks," by W. Bacon. I fully endorse his preference for the "old fogy" way of topping the corn, both on account of the grain and the fodder, and also the labor of harvesting.

I have tested the matter to my entire satisfaction by cutting up at the roots and shocking a part of my corn each year for several years past. When severe frost is apprehended, the "new way" may be advisable, but in all other cases I much prefer that my corn should ripen the "natural way."

I place a high estimate upon the value of corn fodder for stock, and much has been said and written upon the best mode of curing it. The way which I prefer and practice is this:—when the tassel has become dry and the kernel well glazed, I cut off the stalk above the ear, laying the stalks of two hills together. When wilted I bind and pike them in the field, letting them remain, if the weather be favorable, ten or twelve days, then cart to the barn, hanging them on poles or setting up under the roof.

I find that my cattle eat them better if cured in this way, than if hung up in the barn as soon as bound, or if dried wholly in the field.

As I husk my corn mostly evenings, I begin so early in the season that the husks and butts would mould too much, if I did not mix with them a quantity of straw or poor hay. I also salt them freely.

My cattle being judges, the fodder is better cured in this way than when all is cut up together and exposed to the weather the usual time allowed in such cases. Perhaps it is because they have failed to "*get the hang of it*," which I am sometimes told is the reason why I think the labor greater to harvest corn which is shocked, than that which is topped.

While I agree with your correspondent in so many things, I must dissent from his opinion that it is better to feed out all the corn stover in early winter, to the exclusion of other fodder. Fed out *exclusively* it is too laxative, and nothing but the husks will be eaten; but a few fodderings a week, from November to April will tend to keep the bowels of the cattle in a loose and healthy condition, especially if you have much straw or poor hay to feed out. A few corn butts, through the winter and spring, occasionally, will be chewed with a relish.

From my own experience I am led to believe that the well secured fodder from 150 to 200 bushels of corn, fed out judiciously, to a stock of 25 head, is nearly as valuable as an equal weight of medium quality hay.

It is often and truly said, that the value of the turn crop can hardly be overestimated. It is a native grain, and, on a large proportion of our soils, the surest crop which can be cultivated. The farm on which I have always resided, was purchased by my father when covered with its native forest. He was told that he must not expect to raise corn; and when, after a few years, he ventured to plant a small patch, and succeeded in raising *fifteen bushels of ears*, he felt that his land had an unexpected value. I have often heard my mother remark that she looked upon that *first* crop of corn, when in the field and in the chamber, with more satisfaction than upon any succeeding crop, though many times as large. While many of our crops, from causes known and unknown, deteriorate as the land grows older, the corn crop, from improved cultivation, has continued to improve, until reports of 80, 90, or even 100 bushels to the acre, have ceased to create surprise.

"*The golden corn*" has drawn inspiration from some of our most talented poets, but even a Longfellow cannot give it a richer dress than its own bright hue.

J. WOOD.

Royalston, July, 1859.

For the New England Farmer.

LETTERS FROM MAINE---No. 3.

Apple-Tree Philosophy—Should Seed be Planted where the Tree is to Grow, &c.

I read with much interest the observations and speculations of several correspondents of the *Farmer*, who seem to be devoting particular attention to the subject of fruit culture. I, too, would show my opinion, and propose in my present communication to discuss the subject of apple-tree philosophy.

One writer contends that apple trees ought to be planted in the seed where they are designed to grow, as transplanting injures the tree and makes it shorter lived. This theory he supports by the fact that trees which came up accidentally by the sides of fences, &c., prove to be more healthy and longer-lived than those which are raised in nurseries and transplanted into orchards.

I will not dispute the fact alleged, but I will account for it in a different manner. Trees which come up accidentally in the situation alluded to grow very slowly for a number of years, and all slow growing trees are hardier than those which grow more rapidly. Even if such trees, after a while, become rapid growers they preserve the peculiar condensed cellular texture of wood and bark which was at first the result of slow growth. When an apple seed germinates and sends forth its first leaves, or perhaps the first ten or twelve leaves, it has a tender herbaceous stalk, and if the soil or culture force the growth, while in this state, the sap cells become large, and when the stem hardens to wood this peculiarity is preserved and transmitted to every succeeding part of the tree, and even to the fruit. Hence the fact that trees from some nurseries will produce fruit of different average size and flavor from those which are raised in another nursery. Nurseries which are not forced the first year will produce trees of firmer wood, slower growth, hardier character, smaller fruit, and fruit of finer grain than the average of forced nurseries.

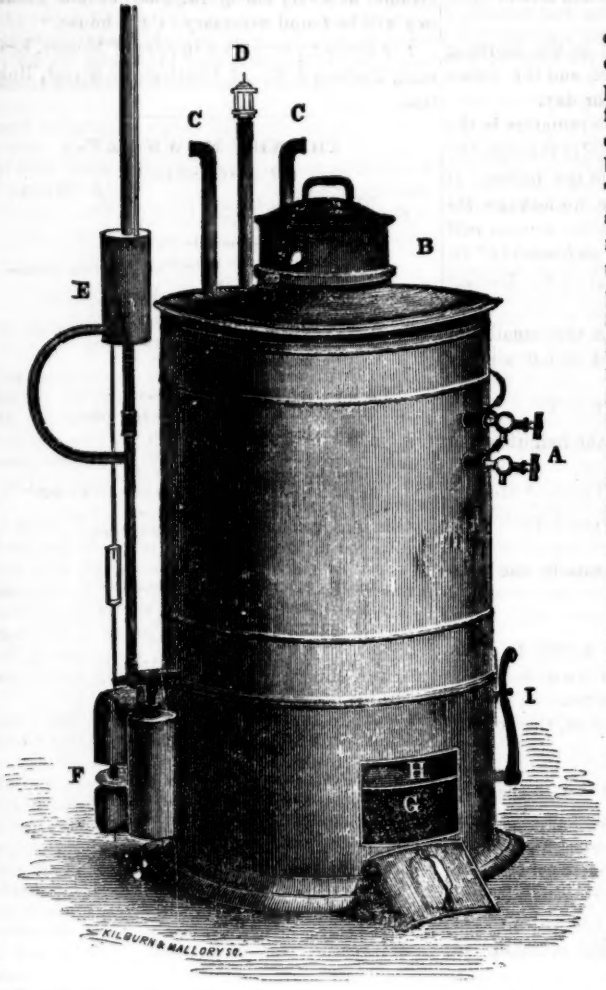
Will not this account for the longer life of apple trees which originate under disadvantageous circumstances? Another cause may likewise have a share in producing the effects under consideration. The mechanic knows that "pasture oaks"—as lone trees growing in fields and pastures are sometimes called—make tougher timber than trees taken from groves. The firmer texture of the wood is the result of the shaking and bend-

ing which the tree receives from the winds in its exposed situation. Apple trees which stand alone or in exposed situations will possess the same characteristics; and I believe the fact is now generally conceded, that orchards planted in situations exposed to the winds are longer lived and better bearing orchards than those which are located in sheltered situations. At least, I think this is the case in high northern latitudes.

SANDY RIVER.

☞ Truth is the most powerful thing in the world, since even fiction itself must be governed by it, and can only please by its resemblance. The appearance of reality is necessary to make any passion agreeably represented, and to be able to move others, we must be moved ourselves, or at least seem to be so, upon some probable grounds.

NICHOLS AND INGALL'S PATENT STEAM WARMING APPARATUS.



Within the extended circle of our readers there is a large class of persons living in cities, or populous towns, who are not farmers, and who use coal, principally, as fuel. This class, probably, numbers some thousands. They are among our prompt and steady supporters, and we feel inclined to say and do something occasionally for their especial benefit. In noticing the Steam Heater, however, we are far from believing that it may not yet be introduced into a large number of farm-houses, heated with wood as fuel, and keep the entire house warm with a less expense than is now incurred. We had it in use all last winter and spring until warm weather, and enjoyed the luxury of a tropical climate, if we desired it, or kept the house at any temperature we pleased. For warming three rooms, each fifteen feet square, and a little more than nine feet high, three rooms of the same size and eight feet high, and two halls, each thirty feet long, we used 5½ tons coal, at a cost of about $40,—and we think this more than would have been required, had we thoroughly understood how to manage it from the first. During the extreme cold of the eleventh of January, when the thermometer fell to 22° below zero, no more coal was used than usual, but the rooms on the north side of the house were shut up, so that the halls and chambers in use could easily be kept up to 60° or 65°, and the sitting-room which the family occupied to 73°, with perfect ease.

It is simple in its construction, and in no way more liable to get out of order than a common stove. It is self-feeding, both as respects a supply of coal and water, and controls the air-draft promptly and perfectly. There is not a single pulley, float valve, chain or pump connected with it, and there are no tubes, flues or valves in the boiler to become obstructed or get out of order.

The apparatus is as portable as a house stove,

and can be put up in a basement, hall or parlor, as may be desired. It requires no more than ordinary skill in its management, and may safely be intrusted to servants who can attend upon an air furnace.

It receives a supply of fuel in the morning sufficient for twenty-four hours, and the steam does not vary in amount night or day.

The steam is condensed in the radiators in the rooms, and runs back to the boiler through the same pipe that conveys it from the boiler. If there is no escape of steam or no leakage, *the same water put into the boiler in the autumn will be found there in the spring, undiminished in quantity.* There is a simple device for feeding water, if it is wanted.

The amount of fuel required is very small, not more than half the amount used in hot air furnaces.

EXPLANATION OF THE CUT.

A, are the water cocks to show the height of the water in the boiler.

B, the fire pot. The fire is *built in the boiler*, by taking off the cover at B, and putting in the coal.

C C, are pipes for conveying steam to the radiators.

D, is a safety valve.

E, a water vessel sliding upon a tube to open and close the air-draft valves at F.

G, shows the position of the ash pit.

H, an opening into the space around the boiler.

I, the handles to the grate.

It is not so much our purpose now to speak of the advantages of this arrangement in regard to health as to the *economy* of the matter; but the great superiority of steam heat over that got by stoves or hot air furnaces, is very generally understood and conceded. Health and safety ought to be the first consideration,—but a saving of dollars *will be*, by a majority.

A six months' use of this steamer has convinced us that we can save the whole cost of the apparatus in a few years in the item of fuel alone. Then there is a great saving of time, as it does not require half the time to tend it to warm the whole house, that it does to tend a stove to warm a single room! Another item of saving is in sweeping. There is no dust from it, either of ashes or coal, so that very little sweeping of carpets or floors is required.

It is ornamental, durable, economical, *absolutely safe*, as it is impossible for it to explode, and gives an elastic, wholesome air to breathe, warmed up to 65° or 75°, without depriving it of any of its vital powers, or adding anything hurtful to it. When the thermometer stands at 70 in the room, the air has a cool and fresh feeling, like that blowing upon a person standing in the shade in a hot summer day.

Those who are building may introduce this steamer at a very cheap rate, as but one chimney will be found necessary in the house.

For further particulars inquire of Messrs. Braman, Perham & Co., 8 Charlestown Street, Boston.

THE NEW MOWN HAY.

BY CHARLES MACKAY.

When swallows dart from cottage eaves,
And farmers dream of barley sheaves;
When apples peep amid the leaves
And woodbines scent the way—
We love to fly from daily care,
To breathe the country buxom air—
To join our hands and form a ring—
To laugh and sport—and dance and sing,
Amid the new-mown hay.

A stranger comes with eyes of blue;
Quoth he, "I'm Love, the youth and true;
I wish to pass an hour with you,
This pleasant summer day."
"Come in! come in! you saucy elf!
And who's your friend?" "'Tis friendship's self."
"Come each—come both, our sports to share;
There's welcome kind, and room to spare,
Amid the new-mown hay."

The ring is formed; but who are these?
"Come, tell your errand, if you please;
You look so sour and ill at ease,
You dim the face of day."
"Ambition!" "Jealousy!" and "Strife!"
And "Scorn!" and "Weariness of Life!"
"If such your names, we hate your kin;
The place is full, you can't come in
Amid the new-mown hay."

Another guest comes bounding by,
With brow unwrinkled, fair and high—
With sun-burnt face and roguish eye,
And asks your leave to stay.
Quoth he, "I'm Fun, your right good friend!"
"Come in! come in; with you we'll end!"
And thus we frolic in a ring—
And thus we laugh, and dance, and sing,
Amid the new-mown hay.

For the New England Farmer.

INSTINCT OF ANIMALS.

MESSRS. EDITORS:—For the specimen of your valuable paper under the new firm, I thank you. Most animals have some peculiarities indicative of a change in the weather, beside the grass-eating dog. The goose, for instance, that usually may be found sitting about the farmer's door, in the summer time, in pleasant nights, however pleasant the afternoon and evening may be, if it is to be rainy or stormy before morning, will most certainly take shelter. Yet they have not the least idea of perpendicular distance, for they will quite as lowly bow the head in passing under the great doors of the barn as under the lowest rail of a fence. Swine, especially those with families of pigs, will indicate a change of weather, and quite surely before a thunder storm, by the great fear they manifest in their uneasiness. A litter of pigs at sea, are as valuable as a barom-

eter,—and at the end of the week, more so, as they serve as a fresh mess for poor Jack.

Most of the papers, particularly agricultural ones, abound in advertisements of artificial manures—they are well enough for use in the vicinity of large cities, where manures, proper, cannot be so well made; but for the country, where farming is pursued as a business, to make it profitable, the fertilizers used must be made upon the premises. AGRICOLA.

Augusta, Maine, July 10, 1859.

For the New England Farmer.

CULTIVATION OF CORN AND OATS.

BY FREDERICK HOLBROOK.

Benefits of Cross Cultivating—Effects of different Fertilizers—Corn not calculated to follow Turnips or Buckwheat—Guano for Oats—Oats and Grass—Guano on Grass.

MY FRIEND MR. BROWN:—I have been looking about in the fields here to-day, observing the modes of cultivation, &c., and now send you a few notes about such things as most interested me in the course of my tramp.

In passing through five or six cornfields, I was impressed anew with the advantages one derives from having the rows of corn marked out both ways of the field, so as to use the horse and cultivator each way between the rows, at hoeing time. Indeed, if the land gets foul with grass and weeds, or is at all inclined to be heavy and to pack close, or to crust over after a rain, the horse and cultivator may be advantageously used twice in a row, each way, at each hoeing. By using the horse and cultivator thus thoroughly, the land is worked up fine and mellow, the labor of hand-hoeing is very much lessened, and the young corn grows all the more rapidly, and is more "stocky" and healthy, for having the soil thus completely stirred up and its particles changed about and mixed anew, or if the manure is near the surface, within reach of the cultivator, having that stirred about and brought in contact with other or different particles of the soil. The horse and cultivator can do very much more for the crop, in the way of mellowing and enlivening the soil, and effectually rooting up grass and weeds between the hills, than can be done by man with the hand-hoe. The hand-hoe is indeed quite necessary for dressing out the hills and shaping the earth properly about the young corn-plants, out beyond that the horse and cultivator are the most serviceable to the crop. So far as I can form an estimate, from considerable particular observation of the effects of cultivating or thoroughly stirring the ground, I am inclined to think one may realize from five to ten bushels more of corn to the acre, by the thorough use of the horse and cultivator between rows running each way of the field, than he would obtain if he worked the land only one way, all other things, as to land, manure, &c., being equal. The gain in the crop by thoroughly working both ways, over what could be realized by working only one way of the field, will be somewhat in proportion to the natural tendency of the land to pack closely and crust on the surface, or to bear weeds and grass between the hills. In any case, however, let the character of the land be as it may, the saving of expense in cultivation will be considerable by working the land both ways, with the horse and a good sharp cultivator, rather than by digging so much between the hills of corn with the hand-hoe, as must necessarily be done if the cultivator is used only one way of the field.

I have repeatedly observed in my own cornfields that where they happened to run out at either end in a long triangular point, so that the narrowest part was too narrow to bother with so short rows crosswise the field, and therefore this end was only worked with the horse and cultivator the long way, while the rest of the field was worked in rows both ways, the corn on the narrow end would not grow so fast the first of the season, nor yield so large ears at harvest, as that on the rest of the field.

Notwithstanding the fine theory that may be stated as to the advantages of level cultivation of the ground for the corn crop, I must still say that I do like good broad hills,—especially, if the land is inclined to pack, or to crust over. A well shaped, mellow hill, not raised too high and peaked, operates to send the corn forward rapidly, and make it stocky and stout.

Several corn-fields have been examined to-day, which have a dressing of superphosphate of lime in the hills. My neighbor, R. BRADLEY, Esq., has several acres of corn, dressed with a heavy coat of manure, broad-cast, and a table-spoonful of superphosphate in each hill. His corn is large and vigorous for the season, and of splendid color. On one field he used superphosphate in a part of the hills, unleached ashes in another part, and plaster in the remainder. That portion of the corn dressed with the superphosphate is decidedly superior in size and color to those portions dressed with ashes and plaster; and it appears now as if this superiority might hold out through the season. Coe's superphosphate was used. It seems to be a very strong manure, and needs a good covering of earth before dropping the seed-corn over it. Occasionally, in a hill, where the superphosphate did not happen to get well covered before planting the seed, the corn was dilatory about coming up and growing, at first,—the superphosphate being in too close contact with it and eating off the little tap roots as fast as they shot out. But at length the lateral roots pushed out beyond the superphosphate, and the ground also absorbed and modified its qualities, so that the downward tending roots could run through it, and now the corn in these hills is growing well, and may perhaps catch up in size with that which had a more favorable starting.

I next came to a corn-field of my own, well manured broad-coast, and in addition dressed with a shovel-full of manure in each hill, on half of the field, and a table-spoonful of superphosphate in each hill on the remainder. The corn has been cut pretty hard by frost at three different times; but it has survived all hindrances, and is now growing fast. On the half that has superphosphate in the hills, the corn is taller and of a deeper green color than that which has the manure in the hills. This goes to show that the superphosphate has the quality certainly of forcing the corn along fast through the first of the season. Whether it will hold out in good works as well as the manure, can be better determined by-and-bye.

Mr. CHARLES LAWRENCE has three acres of corn which is well manured broad-cast, and has a table-spoonful of superphosphate in each hill. The corn is of good size for the season, and its color as good as can be. Here, too, Coe's superphosphate was used, and there are occasionally hills where it came too near the corn, delaying its growth at first, the same as in Mr. Bradley's field; but the roots have at length got good foothold, and the corn in these hills is now growing well.

I next looked at Mr. RUFUS PRATT'S cornfield, which also is manured well broadcast, and on a part of the field the hills are each dressed with a shovelful of rotten manure, and on the remainder with a table-spoonful of a mixture of Mapes's superphosphate with plaster, about half-and-half of each. Here the corn planted on the compost manure is the tallest as yet, but that planted on the superphosphate and plaster has rather the deepest green color. As a whole, Mr. Pratt's corn stands remarkably even, and gives promise of a fine crop.

I next examined Mr. RUFUS CLARK'S corn. He has several pieces which are dressed in the hill with a compost of Mapes's superphosphate with old rotten muck, a handful to each hill, and about a table-spoonful of superphosphate included in each handful. The land is also manured broad-cast. He has also one or two pieces with a shovelful of manure in each hill, instead of the superphosphate and muck. As a general thing, the corn planted on the superphosphate and muck has a deeper green color than that on the manure, but there is little or no difference between the two as yet as to size of stalks. On one of the fields the superphosphate and muck mixture was omitted in two of the rows of corn, while the remaining rows had a handful in each hill. The corn in these two rows is quite small and pale, as compared with the rest of the piece, and shows one, at a single glance, the value of the dressing in the hills, for starting the young corn forward vigorously.

Mr. Clark's practice of mixing superphosphate with dry finely pulverized muck, appears to me to be an excellent one. The superphosphate, thus diffused and modified by mixture with the muck, is not likely to cut off the young tender corn-roots in the hill; and the muck, which is a superior absorbent, imbibes enough from the superphosphate to sweeten and prepare it for use, and thus furnishes a little finely pulverized vegetable food to nourish the young corn, and makes a little mellow hill or place for the roots to work in. The proportion of muck to superphosphate may be such as to enable one to use say a large handful of the compost in each hill, and not include more than about a moderate table-spoonful of superphosphate in each handful of the compost. Perhaps even a smaller quantity of superphosphate would have a marked effect on the corn, especially if the mixture was made up a week or two previous to planting time, and the compost kept in a dry place, under cover. The older, drier and more finely divided the muck is, the better the superphosphate will mingle with it, and the better, every way, the quality of food the compost will make for the young corn.

I noticed, to-day, a field of corn which last year produced root-crops—a part potatoes, a part carrots, and the remainder turnips. The land is of uniform quality, and well and equally manured, broadcast, this spring. There is not much difference in the growth and color of the corn on the portions of the field which last year produced potatoes and carrots, though perhaps the corn after carrots looks rather the best. The corn after turnips, however, is small and pale as compared with that on the other portions of the piece; and from former experience, I should incline to expect that this inferiority may be seen throughout the season. So far as I know, corn does not follow either turnips or buckwheat very well. Manure the land ever so well for corn, the year after it has produced either of these two crops, and you will not get as large a crop of corn as though the land had not borne the turnips or buckwheat. I shall not attempt to give the philosophy of the thing, but have found the fact as now stated.

I have been looking at Mr. BRADLEY'S fine field of oats of six acres. Last year the land produced a light crop of corn. This spring it was plowed and two hundred pounds of guano, and two bushels of oats were sown on each acre and harrowed in each way of the field. Then the land was stocked with sixteen pounds of red clover seed to the acre, and the surface smoothed with the roller. I have not seen so good oats for size and color, nor so thick and perfect a catch of clover, on any other land this season. So far as one can now judge, the guano will prove a very profitable investment. On a few rods at one corner of the field, the guano was omitted, and the oats and young clover here look very inferior, every way, as compared with the growth on the rest of the field, where the guano was applied. The design in thus treating this field, is to get a good crop of grain this year, if possible, and to fill the soil well with clover roots; then to mow off the first crop of clover next year, and plow under the second crop, the roots and stems of which, together with a good coat of manure, to be applied the following spring, it is thought will enrich and enliven the land, and bring it at once into a high state of cultivation for a crop of corn. I shall, perhaps, have something further to say of this experiment, by-and-bye.

I have a piece of land, of a light, loose, sandy soil, which formerly bothered me a good deal when I wanted to lay it down to mowing after it had been taken up, well manured, and planted a year or two. It would bear great corn, and good oats or other grain, but the grass would not catch well. Finally, the last time it was seeded down, I sowed two hundred and fifty pounds of guano, and one and a half bushels of oats to the acre, and harrowed them in; then sowed grass seeds liberally and rolled them in. The oats made a great growth, and the catch of grass was perfect.

If one wishes to seed a rather uncertain piece of land to grass in the spring, with an oat crop let him put on, say two hundred pounds of guano to the acre, harrowing it in well with the oats, and sow the oats thin, so as to give the young grass a chance to breathe, and he will be pretty sure of a great crop of oats and a good stand of grass. I should not sow over seven pecks of oats to the acre, on such land, and it is quite likely that six pecks would be still better. Th

oats will tiller out very much at the root, under the stimulating effects of the guano, so that from one grain, or seed oat, there may be four, six, eight or ten stalks, bearing each a good head of grain, while at the same time the surface of the ground is open, so that the young grass can get a good foothold and grow well. I have been much interested this season in observing a field of thinly sowed oats of my own, and in pointing out to other persons how remarkably the grain is branching out from the root. I have counted from eight to twelve stalks growing from one seed oat. The young grass, also, is coming along among the oats just to suit me, and gives promise of making a good mowing-field.

A friend called my attention to-day to two little patches of grass in his recently seeded lawn, n which he sowed guano about ten days ago, omitting the guano on the rest of the plot. The effect of the guano is very marked, the grass being much thicker and greener on these patches than in other places.

I have several other little matters to tell you about some time, but this epistle will do for now. If one could write out these details as well as he can observe and think about them of a fine day in the field, there might be something done. But the mind will not always wait for the slow operations of the pen, and thus some of the best observations are often lost in writing.

Brattleboro', June 29, 1859.

DOING TOO MUCH WORK.

Our farmers are accustomed to doing a great deal of work,—we think, in many cases, too much, but have not so regular a habit of doing it well. Whether the greater profit is to be found in accomplishing a large amount of work indifferently, or of doing less, and in a better manner, is the question for each one to settle for himself, —for it is *the profit* we are seeking, not quantity or quality, only as profit is concerned. Any person may decide this question with the slightest arithmetical aid, by ascertaining the precise cost of raising sixty bushels of corn on a single acre, and then of raising the same amount on *two* acres of the same kind of land. If the corn on the one acre costs fifty cents a bushel, he will find that on the two acres it will cost him seventy-five cents a bushel at least,—making a loss of one-third in producing an equal amount of produce for the market! It will require skilful management in selling to make up such a loss as this.

This is what we mean in saying that we think a great many farmers do too much work. They are anxious to cultivate quite a number of acres, hoping all the time that from such a breadth of land under cultivation they must reap a large reward. But hoping is one thing, and a critical calculation, based upon well-known facts, is another. They must go back to the illustration of the two corn-fields.

In New England, we believe there is scarcely more than one season out of twenty, in which we cannot obtain *with certainty*, so far as climate concerned, any of the common crops of our farms, if we but manage the lands according to the light which has now dawned upon every department of farm labor. The experience of thousands of wise men is spread before every person who can read, so that the profit of the same amount of labor ought to be twenty or thirty per cent. more than it was twenty or thirty years ago.

We are acquainted with farms of twenty acres where the annual income is not less than $4,000 to $6,000,—and with farms of 100 acres, where the annual cash income is scarcely twice as many dollars as the number of acres! A man on a large farm can raise just as much corn or wheat per acre as a man on a small farm. He ought not to feel obliged to cultivate land merely because he owns it. Herein lies the error. Like the boy with the oranges, he attempts to grasp too much, and loses profit on the whole. Slight manuring and poor cultivation, on an extensive breadth of land, is like the management of the merchant who builds a large store, and fills it with rods of shelves upon which he places only a few goods. He must remain there and superintend it, and at the call of every customer travel four times as far as he ought to, in handing down the goods wanted,—so that his own superintendence and the interest on the capital united in the store and goods exhaust all the income, and he grows poorer and poorer as each year rolls away. While the farmer practices this kind of economy, he laughs at the poor merchant or manufacturer who is daily exhausting his means by it. The phrase has passed into a proverb, "that we undertake too much for our means," and still there are few who do not err in this respect. We forget the actual cost of travel, plowing, harrowing, seeding, cultivating, hoeing and harvesting twice as much land as is necessary for a given crop, and pursue a course which five minutes' investigation will show us is fatal to our profits.

COAL ASHES AS A MANURE.

But few experiments have been made by American farmers, says a writer, to test the fertilizing properties of coal ashes. While we are importing guano and other manures from foreign lands in enormous quantities, and at great expense, it may be well to employ substances nearer home, which are now neglected and cast aside as worthless. Thousands of tons of ashes might be obtained in cities, where coal is extensively employed for fuel, which, when applied to the soil, would doubtless greatly augment its productive powers. It is stated in "Faulkner's Farmers' Manual," an English publication on manures, that coal ashes contain sulphate of lime, with some potash and soda, all of which are known, when separately applied, to produce a good effect

on clover crops, and to constitute an important part of the food of all grasses.

The following experiment by an English farmer, may shed some light on the subject: The round selected contained three perches of clover; the first had no manure, and produced thirty-eight pounds when cut in full head; the second, where four quarts of sifted coal ashes, which had not been exposed to the weather, were applied, the produce was fifty pounds; on the third perch, one quart of plaster was sown, and the crop weighed fifty-four pounds. It will be seen that the ashes increased the clover nearly one-quarter above that on which no manure was applied, which goes to prove that this substance is a valuable fertilizer. Coal is said to be of vegetable origin; therefore, we can see no reason why its ashes should not contain the food of plants. Experiments on various soils and crops might be made by any farmer at a small expense, as coal is employed as fuel in nearly every town.

THE GARDEN AND THE PORK BARREL.

A notable housewife, who presides over the culinary department of her household with "dignity and grace," as well as with remarkable skill and prudence, said to us the other day, "Why, we get half our living from the garden and the pork barrel for four or five of the summer and autumn months." We had been speaking of the advantages to be found in a good garden, not only from the edibles themselves, but from its associations, and the pleasant remembrances which even a good kitchen garden leaves upon the mind.

"Half our living,"—and the family was a large one. So she enumerated some of the excellent linners which she is enabled to prepare from the good things grown in the garden, when seasoned with a piece of corn-fed pork cured in the New England manner. What a variety of vegetables may be had, beginning with the asparagus, and then the new potatoes in the last of June, followed by the peas, beans, squashes, turnips, cabbages, beets, onions, carrots, egg plants, parsnips, green corn, cucumbers, &c., &c. Why, the mouth of an epicure might water at the recital of such an array of good things. Depend upon it, brother farmers, there is nothing that spends so profitably, so economically—and at the same time that gives so much sound health and strength in the family, as a barrel of good sweet pork, and plenty of tender and succulent garden vegetables.

BRAIDING STRAW.—At the meeting of the Rhode Island Historical Society, last week, it was stated that the braiding of straw in this country was first begun in Providence, in 1798, by Mrs. Betsey Baker, daughter of the late Joel Metcalf, and now residing in Dedham, Mass. The first bonnet she made was of seven straws, with bobbin let in like open-work, and lined with pink satin.—*Scientific American.*

EXTRACTS AND REPLIES.

YEARLINGS AND TWO-YEAR OLDS—WILD GRASS IN MEADOWS.

1. When do yearlings change into two-year olds—and two-year olds to three, in the Boston cattle market? The reason I inquire is, I never notice any change in the prices in the spring of the year. For instance,—two-year olds have been quoted from $22 to $26, since last fall. Now if cattle that were two years old last spring are worth from $22 to $26, we farmers want to know it, for the drovers will not pay us over $14 to $16.

When is the proper time for cutting wild or meadow grass? Will it kill it out to cut it early? What little experience I have had, tells me it will, although I have never heard the matter discussed in this part of the country. While travelling in the West a few years since, I often heard the remark, "that it kills out our low marsh grass to cut it early, or before the seed is ripe." We all know very well, that the hay made from such grass is much better if cut early—but there are two sides to the question.

REMARKS.—1. Yearlings remain yearlings until they are two years old, and two year olds remain so until they are three. We believe this is generally understood by cattle dealers, as we have stated it above.

2. The proper time to cut grass, in order to secure the best hay from it, is generally supposed to be when the head is in full blossom; but if the crop is cut at that period continuously for several years, many kinds of grass will certainly run out. Our opinion of the matter is much like yours. In order to obviate the difficulty, would it not be well to cut most of the grass when in blossom, leaving a portion to go to seed, to be cut, threshed, and the seed scattered over the whole meadow at a proper time? In this way you would be likely to secure both objects—get good hay and re-seed the land.

BEANS FOR STOCK.

I have some four or five bushels of beans three or four years old, and no sheep to feed them to. Will it pay to have them ground for my pig or cow, and how much should I feed at a time?

Forestdale, Vt., 1859. A. E. C.

REMARKS.—Certainly it will, and pay we Feed them to either about as you would corn meal. They have about the same amount of nutritive matter that rye has. They are used in large quantities in England for other stock than sheep—for horses, especially.

"CAUGHT A TARTAR."

A correspondent from Media, Delaware County, Pa., writes us some strange incidents in the conduct of game fowls at that place, kept in the game chickery of Dr. J. W. Cooper, author of a new work on game fowls. A few days ago, while a little boy attached to the family was passing

through the chickery, he was set upon by a large game rooster of the Tartar breed, and so severely spurred and billed as to endanger his life. Many and deep were the gashes in his tender flesh, and the injury would have been greater, had not a servant of the family rescued him. Again, while a hen of the same strain was roaming through a field, one of her young was pounced upon by a large hawk. The mother bravely attacked this "fell destroyer of all poultry," and so disabled him as to make his capture easy.

Media, July 8, 1859. T.

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BUSINESS AND CROPS IN RYEGATE, VT.

I never knew such a busy time in this part of the country before. Every thing and every body has been busy; first the elements, rain, wind and jack-frost. The latter was round, at least, on the morning of the 5th inst. It did no injury, however, except on very low land; some potatoes and beans were killed to the ground in this vicinity. Farmers, mechanics, merchants and day-laborers have been very busy. Nearly a dozen large barns have been built in this immediate vicinity, within six or eight months; several of them are very large and commodious, and built with every modern improvement; one improvement is a cupola with ventilator; another is several steam chimneys placed near the centre of the hay mow, made of plank, bored full of holes.

Grass and grain look promising, except corn. Much of our best corn land in the Connecticut valley, and all low lands was planted, and the corn injured, but that on the back high lands escaped the hard June frost, and looks well. Apples are not plenty; wild fruit is very plenty; the bees are having a glorious time on the raspberry blossoms, and white clover.

T. P. BAYLEY.

South Ryegate, Vt., July 12, 1859.

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WHITE SPECKS IN BUTTER.

Next time you churn, take one of those veritable specks (if you find any,) and apply it to the tip of the tongue, and if by the aid of taste, you can possibly discover what the critter is, and conclude that he is a white speck of cheese curd formed in the bottom of a neglected pot of cream, I guess you catch him.

Now for the remedy. Go a visiting to-day, and churn to-morrow.

Yours, in search of hidden things,

MRS. S. PIERCE.

South Londonderry, Vt., 1859.

REMARKS.—We trust that by this time, the grand discovery as to what causes white specks in butter has been made, and that we shall find none of them in our next winter's stock.

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HENS, AND HENS' HUSBANDS.

I observe in your June number a note from Mr. Geo. Vining, in which he recommends a mixed breed of poultry as the best. I partly agree with him in this respect, but take exception to another recommendation, viz., "to keep a small rooster, or none at all." Now I consider him a very unfeeling man to deprive the poor hens of their natural protector, for they like to hear his voice when he crows, and when he answers their cackling. It would be too bad to keep poultry in that unnatural way. I have also heard it stated that hens do not lay so well when kept in that way. There is a breed of fowls in this city called the Black Hamburg, which comes up to the mark of a good article as near as any breed I know. The hens commence to lay about December 1st, and continue to lay almost every day till moulting time, say September 20th. They are nearly as large as the Dorking, and of much the same shape. They do not want to set, have large rose combs which incline gently to one side, are of a beautiful glossy black, and their flesh is very white and juicy. I prefer them to any fancy breed yet introduced to this country. Hoping that your friend will not continue his absurd doctrine of celibacy,

I remain your constant READER.

Halifax, N. S., 1859.

HABITS OF THE SHAD.

The habits of our fish have been but very littl attended to in this country. Our scientific men, it is true, have been very precise in their accurate classification, and in the use of their ponderous nomenclature—they have described our fishes even to the shape of a scale or the number of thorns in the dorsal fin, but they have not condescended to note their habits, their food, their length of life with all such particulars as would interest common readers, and be of use to mankind.

No fish is more valued or more valuable than the shad; yet but few of its habits of life are known. The books are silent, and angling gives no information. It was for a long time, a commonly received opinion that the shad spent the winter in some part of the Gulf of Mexico, and then as spring advanced and the snow ceased running, came along the coast and entered the rivers in succession. If this were true, there would be no uniformity, year after year, in the run of shad in each river. The very distinct varieties would all become intermingled. But each river has its own variety. Those of Connecticut River have long been known as possessing superior size and flavor to any others. The variety that seeks the Hudson as a spawning ground is easily distinguished from ours. This fact of the distinctness of the varieties in each river tends to the belief that shad go no further than the mouth of the streams in which they are hatched.

The habits of the shad are unlike those of other fish. As soon as the snow water has ceased running, they press up the river as far as they can reach, in order to deposit their spawn. In following this instinct, they never stop for refreshment or food. Who ever found anything in the maw or stomach of a shad that would indicate the nature of its food? Who ever knew them to bite at a baited hook? They do not feed from the time they enter the stream until they sink down thin and exhausted into the deep places at the mouth. For this purpose of nature the shad has been preparing itself during the quiet luxuries of a winter, and has become fattened for the use of man, or, if it escape his net, for the reproduction of its species. The shad lives but a single year. It is hatched in the early summer—descends the streams as soon as large enough-

feeds and fattens in the winter at the mouth of the stream—ascends in the spring to deposit its spawn—and descends to die at the bottom of the ocean. This fact accounts for the uniformity in the size of the fish. A Connecticut River shad seldom goes beyond seven pounds, and the variation in size is comparatively slight. The bass, on the other hand, which is known to live many years, varies from half a pound in weight to fifty, even in our own river. It has a longer time to grow, and shows a much greater diversity of size. These considerations have lately led to the conclusion that one year only was the duration of a shad's life. What was only a matter of conjecture and inference has been lately proved by the artificial fish-breeders. Somewhere in the State of New York, one of these raisers of fish from spawn which he fed in early life with crumbled crackers strewn upon the pond where they were kept, has proved their short hold on existence. He raised them for the purpose of supplying the very large fish he had in his tanks and ponds with food. As this science of breeding fish is known more, the habits of the different species will be more easily described.—*Hartford Courant.*

For the New England Farmer.

STUMP-FOOT CABBAGES.

The remedy given in reply to "Albertus," "for stump-footed cabbages," does not agree with my experience. I raise my own seed, not only for myself, but for others, and from the most perfect heads of the kinds called "Early York," "Low Dutch," "Drum Head," "American Premium" and "Savoy," and from the seed thus raised, more than one-half of my cabbages have proved stump-footed, whilst others growing side by side formed good heads. One of my near neighbors who sowed the same seed, raised several hundred, and not one stump-footed. I have found from practice and close observation, that not only cabbages, but the large ruta bagas or Western sweet turnips are subject to this disease, and from inspection, have found in the roots small white maggots.

The remedy which I have tried thus far successfully, is to mix plaster of paris and ashes in equal parts, and add one quart of fine salt to each peck, put a large table spoonful to each plant, mix the earth with the compound, but confined to the roots when transplanted. Soot, lime, and pulverized charcoal in equal parts has answered the same purpose.

Out of 250 heads last year, not one which had the above compound was stump footed, whilst others were more or less damaged, and some entirely worthless. S. L. B.

Rockingham, Vt., July 11, 1859.

REMARKS.—Excellent. That is a remedy worth having—because, while the disease is prevented or arrested, the remedy used is a fertilizer that will produce the finest plants. The ingredients are all common and accessible, and if the prescription is sure, this information is worth to thousands of our readers, all the *Farmer* costs for one year.

CROWS AND OTHER BIRDS.

"Crows and other birds" in "Old Kentuck," by C. M. Clay, is a very interesting letter, especially to those who are fond of the feathered race, as is your humble servant. But I don't understand why our New Hampshire crows should be so much more prolific than the Kentucky crows are. Our crows usually lay as many as four eggs, and I think there is occasionally more than that number of eggs or young found in their nests. Some four years ago, a pair of crows built their nest on a pine tree within a stone's throw of my confield. Soon as the boys ascertained the fact, they were rife for pulling it down. But I told them if the crows would let the corn alone the nest should not be disturbed. About ten days after the corn came up, early one morning they visited the field, and plucked up fifty or more hills. The boys did not want to be told the second time to tear down the nest. It contained four young crows nearly large enough to fly; they were, after killing them, hung upon poles about the cornfield. The old crows soon ascertained the truth of the matter, and "poured out their vociferous imprecations" in a way that soon brought to their company some twenty more, who hovered high in the air, and such a scolding as we got was a caution to us about killing young crows.

Last year they were so bold and troublesome upon my grain, corn and potato fields, that I had to, very much against my will, resort to strychnine-steeped corn. I soon procured dead crows enough to dangle in my fields, and was no further troubled with those that escaped the poison. Taking the year round, I think the crows do the farmers a vast deal more good than hurt. Our migratory birds return here much in the same order as stated by Mr. Clay, in Kentucky. The blue jays and snow birds stay with us the winter through. We have four kinds of swallows, the barn, the chimney, the bank and the eaves swallow. They all build very differently. A pair of "orioles, with their rich and varied tropical plumage and luxurious habits," have annually built their nest on an elm tree within ten feet of my house for over twenty years in succession.—LEVI BARTLET, *Warner, N. H., in Country Gent*

For the New England Farmer.

ONION MAGGOT.

MESSRS. EDITORS:—About a fortnight since a neighbor said to me, "I shall lose all my onions. The maggot is eating them all up." I took some guano and went to her garden. The were making bad work. I put guano on all but two rows, and have kept watch of them since. Almost all the onions on the two rows are gone, while the other rows, which I put guano on, have lost very few, if any. So much for the experiment. Whether it was the faith or the guano that stopped their working, I cannot say. I will leave that to friend Proctor.

A neighbor of mine, Mr. Farley, who raises a good many onions, says, "Poke the dirt well away from around the onion, and one hot day will kill the maggot." ED. EMERSON.

Hollis, July 1, 1859.

HOW A CHICK IS HATCHED.

In conversation with Judge Butler, of Norwalk, a few days since, he explained the operation of the hatching process, which is so beautiful and philosophical, that as we have never seen it explained in books, we repeat it to our readers.

The chick within the egg breathes through the shell; in the silky membrane lining the shell the blood circulates, and is thus brought in contact with outer air.

The head of the chick is in a position as if it had been brought round under the wing and over on the back—a little one side of course—in such a position that the least muscular exertion will press the beak against the shell, and about in the middle, and when any violent struggle is made, it will break a little hole in the shell. Now this little movement of the head, perhaps an eighth of an inch forward, turns the chick in the shell so that when the head is drawn back into its normal position, it is brought against another portion of the shell. The next struggle breaks a fresh hole, and so on, each struggle making a new opening in the shell.

These struggles, as the chick gains strength from breathing the fresh air, become more frequent. Finally, in the course of half a day perhaps, as it goes on turning itself in its shell, the little blood-vessels which originally formed a connection between the chick and the lining membrane of the shell, are drawn so tight as to prevent circulation, or are twisted off, and when holes have been punctured and the shell cracked about two-thirds around, the shell falls apart and the young chanticleer steps out into a new world.

Occasionally the lining membrane of the egg is so tough that the shell parts from it, and leaves it unbroken, except in the little holes described, and so if not seen in time the chick dies; a pair of scissors will effect a liberation.

It is dangerous to attempt to take a chick from the egg before it has, as will be evinced by the cracked shell, turned itself nearly or quite two-thirds round; otherwise the blood vessels spoken of will be broken, and the chick either bleed to death or be long in recovering.

The whole process may be watched if the egg be kept warm in the hand, and observed as its struggles call attention to it. This will not interfere with reading or writing, and is instructive and interesting.—*Homestead.*

HOUSATONIC AGRICULTURAL SOCIETY.

This society held its 17th exhibition at Great Barrington, on the 22d, 23d and 24th of September, 1858, and it was quite a spirited affair. It embraces within its bounds, some of the most noted stock-raising towns in the State—of course, there was a fine collection of stock on the ground. The reports are quite too meagre. The farmers of Lenox, Barrington, Stockbridge, and other towns, should give us some valuable information respecting the breeds of stock which they raise, and the best methods of feeding them, and preparing them for market.

Two premiums were awarded for the culture of an acre of winter wheat, and six premiums for six acres of spring wheat.

Premiums were also awarded for crops of corn, rye, barley and oats. We are glad to notice this, especially premiums for the encouragement of wheat-raising. We think the interest of Massachusetts farmers requires that they should pay more attention to this crop than they have for some years past.

The flowers were not forgotten—as seven premiums were awarded for beautiful collections, showing that taste and beauty are cultivated and appreciated among the hills of Berkshire. How could it be otherwise in the home of Mrs. Sigourney? The address, by MARSHALL WARNER, contains many capital suggestions. The amount of premiums awarded was $879, indicating that the society is in a healthy and flourishing condition.

For the New England Farmer.

CUTTING OFF CORN STALKS.

MESSRS. EDITORS:—A correspondent recently dissents from the practice of permitting the stalks of corn to grow on till the maturity of the grain. I would premise that this cutting off the stalks, while the leaves are green or healthy, is contrary to all the known principles of vegetable physiology. He says "that by cutting off *after* the pollen has fallen from the spindle, the wound will soon heal up, and all the upward circulation above the ear is stopped, and the remaining nourishment which is drawn from the soil passes to the ear."

Your correspondent may not be aware that the crude sap which passes up *has no immediate* effect upon the growth, until it enters into the leaves or lungs, and is there elaborated, (manufactured,) and that the flow of sap is from the leaves downward. I have not the fear which he expresses, "that the article he referred to may do harm with inexperienced farmers," for I should say at the outset to such, *ascertain whether the worth of stalks when taken off, is of more value than any additional weight in the grain.* There are many ideas relative to the growth of trees and plants, which are not true in fact; thus, much is said about the ascent of sap in the spring, and its descent to the roots in autumn. The sap in spring commences at the top or extremity; it is there that the excitable buds begin to swell independent, thus early, of the root; the last place it reaches is the roots. The writer says that, "by early topping, the sugar is retained in the stalk." Now, if he will but raise a few stalks of the sugar corn or imphee, and late in summer, when the plant is in the same condition of growth as the corn, when he recommends this topping, he will find it difficult to detect any saccharine matter in the stalk; on the contrary, if he will let it stand until the leaf has dried, and then cut it off, he will readily find that sugar is so fully developed as to occasionally drop from the end of the stalk.

Another familiar example which shows the importance of the leaves, while green, to remain on

plants, is exemplified in a tulip or hyacinth bulb. If, even after the flower and flower-stem has dried away, and while the green leaves remain, you now take up these roots, they will shrivel and be unfit for resetting; they must remain in the ground until the leaves shall have performed their office in the consolidation of the bulb.

I have thus hastily drawn up these remarks, which could be extended by numerous examples of the folly of interfering with the leaves or lungs of plants, while in a growing state.

One reason which I have found to be given for cutting off the tops of corn was to accelerate its ripening, but I understand this writer to say that "corn will not ripen so quick by several days, with the stalks taken off early, as it will if suffered to die altogether." I have supposed that by this practice it ripened prematurely.

Salem, Ms., 1859. J. M. IVES.

For the New England Farmer.

A NOXIOUS WEED.

I have noticed with interest for a few months past, in a number of papers, that there appears to be a waking up among the farmers to the greatest scourge in the form of a weed that ever visited our American land. I have reference to "The Weed," as the Springfield *Republican* calls it. I cannot give the botanic name, and indeed I do not know as it has any; yet it does not want for names. I will mention a few, most of which I have seen in print. Butter and eggs, stink weed, devil's snake, dragon's weed, Chloe's, Mary's, Mother Wait's, Mother Rice's, and Boyanton's weed. It has a yellow blossom, a small, narrow, picked leaf, somewhat in form like that on flax, only larger, the color blue rather than green, its odor very offensive, and will mature so as to produce seed after being cut two or three times a year. One traveller reports to have seen it growing spontaneously in eleven different States. Hydra-headed, it matters little which end is up, or what part of the root touches the ground. I have known it to grow two or three feet high, and so thick as to run out the grass, almost entirely, on the best of land. Cattle will not eat much of it green, but when ripe will eat the seed and scatter it where they go. If let alone, it spreads beyond conception.

Thistles, daises, cadlock, cale and fire grass, when combined, will not prove so great a pest to our New England. How it was first introduced remains a mystery; most probably, in foreign seeds.

Some have introduced it into their land by having it cultivated in their gardens for the blossom. By what I can learn, five of the above last mentioned names were given for this reason. It is estimated that the above named weed increases in New England at the rate of twenty-five per cent., notwithstanding the effort made to destroy it. I have seen acres of land in itself very good, that has been reduced more than one-half its value, by having a quantity of this noxious weed in it.

Now, Mr. Editor, will you give us the true botanic name, and tell us if there is any use can be made of it, for the benefit of man or beast, or tell us how it can be annihilated from our land? I have heard it said there was a class of flies in India that would destroy the weed, and that we had better send express order for a bag of them. I am afraid *say so* will never do us any good. I give you my experience with it for some years past. It made its appearance on our farm, exciting no suspicion until it was discovered to have taken almost entire possession of one field. I mowed and carried off all I could and burned it, yet it appeared as prolific as ever. I then plowed, planted with corn, broom corn and potatoes, hoed it three years, gave it one late hoeing every year, so as to prevent seeds ripening, but to no good purpose. I then seeded to grass, and sometime before mowing, carried on salt, and where the weed was very thick, I scatt-red on the salt dry, broadcast, thick enough to kill everything green. I then made a strong brine, and having salt constantly in the bottom of my pail, put it on to the weed with a brush broom, taking a little salt each time, and when I could, stamped it with the heel of my boot. In this way, whether sunny or rainy days followed, there would be a briny surface. I continued the process the first season, going over the ground three or four times. I repeated the application last season with equal success as before. I shall expect the present year there will be less of the weed, by seventy-five per cent., than last year.

I wish hereby to notify those that see it approaching them, if by roadside even, to beware.

A NEW ENGLAND FARMER.

Deerfield, Mass., July 8, 1859.

REMARKS.—The weed spoken of above by our correspondent, is undoubtedly the common Linaria, called toad flax, from the resemblance of its leaves to flax. It is also called Ranstead weed, and Butter and eggs; why it has received the latter name we do not know, unless because its flower resembles butter in color, and its odor that of rotten eggs.

Dr. Darlington, in his "American Weeds and Useful Plants," says "it is extensively naturalized —has become a vile nuisance in our pastures and upland meadows. Mr. Watson, in his annals of Philadelphia, says it was introduced from Wales, as a garden flower, by a Mr. Ranstead, a Welsh resident of that city; and hence one of its common names. It inclines to form large patches, by means of its creeping roots,—and as far as it extends, takes almost exclusive possession of the soil. Although the flowers are somewhat showy, it is a fetid, worthless, and very objectionable weed,—the roots very tenacious of life—and requiring much persevering effort to extirpate them."

HABITS OF FISH CHANGING.—The habits of fish, in respect to taking the hook, are said to be much changed within fifty years. The Grand Bank fishermen found once no difficulty in taking cod by throwing the hook and line from their vessels; now each vessel is almost always provided with dories in which the fish are taken and brought to the vessel. Mackerel fishermen once

found fish inclined to take the hook, as blue fish, by trailing; late years they take the hook as soon as it is thrown into the water, and a vessel needs but a few hours for a full supply, if they will "bite." Now it would seem that the water may be full of them. and not one can be taken out by the hook. At the present time in Provin etown harbor none are taken by the hook, while the whole harbor is crowded full of them. The introduction of nets has been a great gain in the way of taking them, and it is predicted by some that mackerel will soon be taken upon this coast only by nets.

For the New England Farmer.

THE PROGRESSION OF PRIMARIES.

ANALYSIS OF SOIL AND FERTILIZERS.

BY JUDGE FRENCH.

Whether the first egg was created before the first bird, or whether the first bird laid the first egg, is not settled, perhaps, either by reason or by revelation. Whether man was created upright in form, at the first, or, according to the idea of the author of "The Vestiges of Creation," was originally a very low kind of a worm, and gradually crawled up through millions of successive generations of fishes, reptiles, birds and quadrupeds, to the dignity of the human, does not immediately concern us, as agriculturists. We all believe in *progress*, and that nature usually walks onward to higher and higher results. Hearing a geologist once reasoning learnedly that this continent had once been submerged, from the fact that marine shells are found on the tops of the highest mountains, we suggested, somewhat maliciously, that it was as easy for the Creator to make mountains with shells on their tops, as otherwise! "Yes," said he, "He might have done it, *but He did not!*"

Probably everybody agrees with the geologist, that when order came out of chaos, the earth gradually took form, and that whatever of creative energy was employed in calling into life the various living creatures which inhabit it, for the most part, changes everywhere are wrought through the operation of fixed laws, and that every little shell of the seashore is composed of matter in a condition somewhat different from that in which it before existed. It was before part of a rock; it has advanced to be part of an animal. It is chiefly lime now, as it was before; but lime of somewhat different properties. For some reason, we generally believe, that oyster shell lime possesses properties for agricultural purposes which are not found in the lime rock.

But our mention of the shell has led us in advance of our argument. Let us return. A few years ago, all the world was talking of soil analysis. The theory was beautifully simple. Thus, plants are composed of certain known substances, which can be ascertained by chemical analysis. To form this plant, the soil must supply a proportion of these elements. Phosphate of lime makes a great part of the ashes of wheat, for instance, and therefore if the soil has not this phosphate, it must be added, so that the wheat plant may find, and appropriate it. Phosphate of lime is found in bones of animals. It is also found in the rocks at Dover, New Jersey, at Crown Point, and other localities. The chemist analyzes the bones and the lime rock, and they seem to all his tests, identical. They are applied to the soil, and the animal phosphate wonderfully nourishes the plant, while the mineral phosphate produces very little effect. Potash from wood is a powerful fertilizer for many plants. Felspar, one of the constituents of granite, contains seventeen per cent. of potash, but pulverize it as we may, it produces no such effect upon plants, as potash from vegetable sources.

Manifestly, there are more things in nature than are dreamed of in your philosophy. The plant knows more than the chemist! There *are* differences which the chemist cannot detect.

And now we are coming to the learned words at the head of our article.

All substances in nature are said to be composed of sixty-four simples, which we first, or *primarily*, find in rocks. The theory then is, that these rocks, in the lapse of ages, have been broken and worn away, and from their debris, soils have been formed. Next, we find those same substances in vegetables, and finally, in animals; the same, so far as the chemist knows; but changed or *progressed*, as the *plants* plainly tell us. Even the microscope, which shows us eels, and even sea serpents, in Cochituate water, and rhinoceri on the surface of figs; which can detect at a glance, the different kinds of blood, and *almost* discern the oxygen in the atmosphere, can see no difference between these two kinds of phosphates. But the plants, with their instincts, sharper than man's reason, and more subtle than chemists' tests, decide that for their food, the one is far better than the other. Why is this so?

Professor Mapes, of New York, has been for several years discoursing upon this topic through the *Working Farmer*, and before the New York Farmers' Club. His theory is, that the elements, which we may find apparently identical in the rock, and in both the vegetable and animal matter, are first taken up by the lower orders of plants like mosses and lichens, that they have thus *progressed* one step, and that on the decay of those lower plants, those same elements may now be suited to the constitution of plants of a higher order, and so on, till passing gradually upward, they form part of the food of animals, including man, and thus become a constituent

part of flesh and blood. Having thus *progressed*, perhaps having again and again constituted part both of vegetable and animal substances, those elements acquire an aptitude for such organization, and so are the more readily taken up anew to be wrought into new structures, just as grape cuttings buried in vineyards form the best nourishment for the vine, and as egg-shells are found by hens, the most convenient substance of which to make shells for new eggs.

In the *Working Farmer* of April, 1855, Professor Mapes clearly states his theory, which we have attempt briefly to indicate. He there states as known facts, that if we apply a quantity of bullocks' blood to the soil, it proves a powerful fertilizer, whereas if we apply the exact equivalents, so far as chemistry can tell us, taken from the primary source of rock, and dissolved, the effect as a fertilizer is very small; and so if we use phosphate of lime made from bones, and the same amount of mineral phosphate, the bone phosphate will prove by far the better manure. Yet the chemist's analysis finds the mineral phosphate taken from the rock at Crown Point, Lake Champlain, and other places, in various parts of the world, identical with the phosphate from bones, and sets them down as of equal value to the farmer.

We think the readers of the *New England Farmer* have a manifest interest in this matter, even if it does savor somewhat of abstruse science. We are all buying what one of our neighbors comprehensively calls "bag manure," and we read in the advertisements, certificates of learned chemists, that this kind of guano contains such a per cent. of phosphate of lime, and this patent fertilizer such a per cent. Now, if phosphate of lime is all one thing, and produces the same effect, from whatever source derived, why there is no objection to considering it a lawful tender to the farmer for his money, but if the above theory is correct; it may be the old illustration literally verified, of *asking for bread and receiving a stone!* buying plant-food and receiving an indigestible rock.

In a recent article, Professor Mapes states his opinion even more strongly than before. He says:

"Phosphates have no value for agricultural purposes, unless taken from *organic life*, like the blood and bones of animals. The phosphates from the phosphatic rocks and volcanic deposits, *miscalled guanos*, although ground and treated with sulphuric acid, *have no value as fertilizers*, and cannot be absorbed into the higher class of plants, such as are now required for the use of men and animals. They must first be taken up by lichens and mosses, and be progressed by them in a way which chemistry as yet has failed to discover, and on their decay and redeposit of their phosphates in the soil, be absorbed by a higher class of plant for further progression, and so on through nature's laboratory, until we find the progressed phosphates occupying the bones of animals.

"Man might as well try to exist on dissolved rocks instead of the same constituents composing plants in a progressed state, as to attempt to feed plants on primitive phosphates, no matter how manipulated by grinding and acids."

These views have recently received strong support from a published report of a committee of the French Academy of Sciences. The fact that mineral phosphate is far inferior in value and effect for agriculture to the animal phosphate, is clearly stated, though the reason assigned seems to be the difficulty of reducing the mineral to a sufficiently minute state of division. The French Committee say—

"The importations of mineral phosphates from Estramadura into Great Britain, have not produced amongst the agriculturists all the favorable results which were expected from them. One of us, M. Dumas, had the opportunity, in 1850, of stating this fact, during a mission with which he was charged by the Minister of Agriculture and Commerce, relative to the agricultural improvements introduced into England, Scotland and Ireland. It does not appear that they have since succeeded in obtaining in Great Britain as good effects from the mineral phosphates as from bones, or the black residues of the refineries."

* * * * * * *

"On his part M. Moride has rendered indisputable services to agriculture, by analyzing the manures deposited in the Government dockyards, and, exposing certain frauds in commercial manures, has proved by direct experiments the insolubility of many mineral phosphates in the weak acids, in the state in which they are now offered to agriculturists."

* * * * * * *

"We shall render to agriculture a still greater service if we discover the means of economically dividing the mineral phosphates to the state in which they readily become assimilable by plants."

Whatever the true theory, it is manifest that the difference between animal and mineral phosphates is everywhere admitted among scientific men. It is not enough, then, that the guano or superphosphate be certified to contain a certain proportion of phosphate of lime. There is a further question.—*Is this phosphate such as the plants can use?* If not, whatever the reason, it is useless to the farmer. Careful experiment alone, it would seem, can answer this question as to any fertilizer from an unknown or unreliable source.

The farmers of the present day require not only knowledge enough to perform their farm labor intelligently, but enough, also, to defend themselves from their scientific friends, who innocently sign all sorts of certificates, commending often, it is feared, new compounds as fertiliz-

rs, from a too great reliance on supposed chemical laws.

And finally, an analysis of a soil or of a fertilizer, to be of any value to the farmer, must indicate, not what are the whole elements, but what are those which are in a condition to feed the plants. A granite boulder or a grindstone may contain all the elements of a specific manure, but it would be rather hard fare for a young cucumber or a tomato plant to thrive on.

For the New England Farmer.

COAL ASHES AS A DISINFECTANT.

At this season of the year almost every one is troubled by the noxious vapors arising from vaults, the outlets of sinks and drains. I am not aware of having anywhere read a recommendation of coal ashes for this purpose, but it is a fact, that a very slight covering of coal ashes will prevent almost all noisome odors, and will also prevent the rapid and troublesome increase of flies, from stagnant water or manure heaps, which so much trouble the peace and comfort of neat housewives. Whether the effect is merely mechanical or chemical, I am unable to state, but that it is certain and effectual, I know by repeated experiment. A compost of night-soil and coal ashes makes a very valuable, inodorous and inoffensive application, as dressing to the soil, especially for light lands; for heavy soils, I am inclined to think coal ashes, except in a very small proportion, are injurious, making the soil colder and heavier; at any rate, heavily coating the earth with coal ashes about the roots of one or two trees, of the same variety, retarded its blossoms and leaves, a week or ten days, and snow covered with coal ashes will, for a long time remain unmelted.

A very striking instance of the value of coal ashes as a disinfectant was seen last year in the filling below the Public Garden with coal ashes by the city; through that coating no odor of marsh mud or decaying vegetable matter was able to make its way. The cheapness and readiness with which this material can everywhere be had, the comparatively small quantity necessary, and its being more effectual than any substance known, has led me to make this use of it more generally known, by the aid of your columns. F.

Boston, July 12, 1859.

REMARKS.—Coal ashes is a good disinfectant—not so powerful as dry, pulverized clay, charcoal or meadow muck, but can be obtained with more facility than either of the first-named articles. We can endorse the statement of our correspondent, as we have long used it, and found it valuable for the purposes of which he speaks.

☞ An experienced writer on propagation says:—"Never increase climbers or plants from suckers. The like never produced the like more to the letter than do these plants from suckers. Destroy all suckers, is my maxim."

For the New England Farmer.

A FEW NOTES ON DWELLING-HOUSES.

BY WILSON FLAGG.

A great deal of advice has been proffered to the public for the last ten years, on the advantage of possessing "beautiful dwelling-houses," until our people are almost persuaded that the rudeness, or the refinement of a man's character, is created by the style of the house he occupies. It is maintained that taste cannot long survive in a homely house; and it would seem that an illiterate boor needs but to quit his hovel, and become the proprietor and occupant of an ornate villa, to be transformed into a gentleman and a scholar. It is also supposed that domestic happiness is greatly increased by the tasteful embellishments which are appended to the outside of one's roof. I believe this idea has produced more mischief than good; it has led men into extravagant expenditures upon the style of their buildings; it has caused them to overlook that combination of utility and convenience, which is the chief end of home-architecture, and to seek after embellishments at the expense of that charming simplicity, which renders so many old houses and their surroundings, objects both of affection and delight.

It is not true that a man is made more contented or happy, by living in an elegant, ornate, or beautiful house; and no man was ever improved in character or manners, by adding architectural ornaments to the outside of his dwelling. There are certain requisites demanded by comfort and convenience, which seriously affect the happiness of a family, and ought never to be neglected; but neatness, rather than ornament, should be the aim of those who are seeking after home-embellishments. A large proportion of the most virtuous and liberal men in the land, are found among those who live in homely houses; for the plainness of the exterior of one's dwelling inspires contentment, while the opposite style fosters vanity, and creates a kind of necessity for costly pretences, which are incompatible with a generous hospitality.

There is a mean between an ornate and an ugly style; and the houses which are usually called plain or homely, occupy this mean. Many of these homely dwellings are really beautiful, in the best sense of this term, where we perceive in them a perfect adaptedness to the wants and habits of an honest and benevolent family. Their moderate, but sufficient accommodations for all private and hospitable purposes; their open enclosures shaded by one or two large trees, and not crowded with a profusion of needless shrubbery; and on all sides appearances, more easily perceived than described, indicate that the family live for happiness and not for pretence, for friendship and not for fashion.

Ugliness is any quality in a building that excites disagreeable emotions from its want of outward evidence of comfort and convenience; and it may exist in connection with an excessive amount of ornament. A building is ugly, when it is unsupplied with those mouldings which are required to relieve the abrupt, naked and angular look of its exterior; it is ugly, when it has a large projecting roof, that gives it a toppling and dangerous appearance. This is the fault of many

ornate houses, which have been erected within a few years, that seem as if they might easily be unroofed in a high wind.

A house may be ridiculous, as well as ugly. It is ridiculous, when it abounds in conspicuous ornaments that do not harmonize with its general character; as when Grecian columns support a large porch attached to a mean house; also when a building manifests an attempt to imitate a style which cannot be attained; as when a house, at a cost of only two or three thousand dollars, is made after the model of a baronial mansion. There are many of these absurdities among those houses in our land which were erected by men who were ambitious to produce some extraordinary work, and whose sense and judgment were not equal to their ambition.

We ought to adopt that style of building, which is calculated to inspire the owner with permanent satisfaction, and tends to promote a *frugal hospitality*, as distinguished from a *niggardly extravagance*. A frugal hospitality distinguishes those families who indulge in no fashionable expenses; who buy no costly furniture that is not needed, but who are always ready to entertain a friend; who pay those who work for them justly and generously, and give freely to rational purposes of charity and public improvement. A niggardly extravagance marks those who furnish their houses with costly gewgaws, dress themselves in finery, and pay largely for fashionable amusements, while on the other hand, they shut their doors against company, pay those who labor for them the smallest pittance they can force them to accept, and give nothing in alms, except in such a way as to gain applause.

Fine houses certainly encourage this sort of selfish extravagance; they foster a spirit of rivalry, and a love of show and "gentility," and oblige a family to live meanly in many respects, to enable them to support the expenses of their ostentation. Our neighbor, for example, who is a manufacturer, having crippled his fortune by building a fine house, immediately cuts down the wages of his operatives to save himself from embarrassment. His new and elegant stable requires a pair of elegant horses; this additional expense obliges him to dismiss one of his needful clerks, and his son, who was intended for college, is employed to fill the vacancy. The costly furniture which was purchased to correspond with the style of his new home, requires the cutting down of some necessary expenses for comfort; and although he is now supplied with more ample accommodations for company, he is obliged to diminish the amount of his former hospitalities. In this way has many a family been forced to perform private acts of meanness, in order to pay for their affectation of munificence!

All the modern improvements for utility in home-architecture, so far as they can be afforded, should be adopted in the cheapest and humblest dwellings, because they serve to promote health and comfort, and to abridge labor; but a sufficient amount of decoration has been bestowed upon a house, when its outside appearance is made to correspond with its interior perfection. The highest kind of beauty springs from the manifest combination of neatness and convenience; yet how often do we see dwelling-houses tricked out with various ornaments, and neatly painted, while an ugly sink-spout discharges its waters conspicuously upon a grassy bank, and destroys all the beauty of the place! If, in this case, there is neatness within doors, the outside is false to the character of the interior.

There are other ways in which a house may be false in its appearances, when, for example, it appears to be built for purposes of hospitality, while the owner and his family live like misers, and only to themselves. It is remarkable to what an extent this kind of ostentation in fine houses is carried by the meanest and most miserly sort of people. I believe it is only in this country, that the sight is beheld, of an elegant and spacious dwelling-house, with numerous large and handsome rooms, provided with furniture as costly as the house,—while the master and mistress seldom entertain a party of friends, and live with all their family in a back room or the kitchen. I would not find fault with such people for occupying that part of the house which their manners and habits are best suited to adorn. I would simply inquire for what purpose seven or eight superfluous rooms were made, since the family neither occupies them, nor devotes them to hospitality! How much more sensible their conduct, if the house had been planned to correspond both in size and appearance, with their own habits and requirements! Such a home is designed neither for the proprietor nor for his neighbors. It is built by a vain man for the idle gaze of a public, who are not allowed to soil it with a single footstep. In this case, the grandeur of the house serves to render the meanness of the owner the more conspicuous.

All this, however, is rather affectation than hypocrisy, which is more commonly manifested in our sepulchral monuments, and in the style of our churches, than in our dwellings. When a man who has led a wicked life, erects before his death a solemn marble tombstone, with a cross and other religious devices, and engraves upon it certain impressive mottoes, the work is an act of hypocrisy. But the affectation that marks the builders of dwelling-houses is that of endeavoring to seem wealthy, when they are poor; gentlemen of leisure, when they are devoted to laborious toil; or princes, when they are only men of wealth, and slaves in their own counting-rooms. It is very common to see the house of an illiterate adventurer furnished with its library and study, while the humble parsonage, right opposite, is so poorly supplied with rooms, that the clergyman writes his sermons and pursues his studies in the parlor or living-room.

It is very customary for the press to ridicule plain houses, because the cant of the times jingles in praise of "the beautiful." But if any one will take pains to study the effects in landscape of the different styles of building, he will find that homely houses, made for comfort and not for show, are the most pleasing objects in rural scenery. There are many who will bear witness of instances I have often observed, in which the beauty of a charming scene has been totally destroyed, simply by removing a neat and plain cottage, and putting up an ornamental one in its stead. The reason why we are thus affected, is that the one wears the expression of freedom and comfort, the other that of vanity and restraint.

If the ornate styles of buildings were favora-

ble to a generous and comfortable mode of living, they would not deserve censure. But if I were to measure the hospitality of a stranger by the style of his house, I should declare in favor of the owner of one that is homely and moderately spacious; and should suspect the liberality of one who lived in an ostentatious house, as I should doubt the piety of those who occupied the most expensive pews in a fashionable church. As this man's palace loomed before my sight, I should feel some misgivings, and say to myself —"These poor people who live on pretence, cannot spend much for generosity."

WHY SOWS DESTROY THEIR YOUNG.

A writer in the *Homestead* gives an article on this subject, in which he argues very conclusively that "costiveness and its accompanying evils are the main causes of sows destroying their young—and proper food is the preventive and cure." He says, and the fact is patent to thousands of pig-raisers, that sows never eat their pigs when running at large, with plenty of green food as in autumn, but with hardly any exception, sows littering early in the spring are troubled with costiveness, often very severely. This causes extreme restlessness, often almost frenzy, and the pains of labor increase it until they destroy their young or any other living thing within their power.

"Green food is the cure." If sows are confined in pens at any season, and especially in early spring, they should have a daily supply of green food for some weeks before littering. Potatoes, sugar beets, carrots, parsnips, and such like, are excellent—and half a peck per day is amply sufficient. If no roots are to be had, sulphur—a tablespoonful two or three times a week —may be given in their usual food; and charcoal is also beneficial. Sows should not be moved about from pen to pen at this time, as it disturbs and irritates them—they should be put by themselves at least a month before littering, and used at all times with kindness and due attention to their comfort.

Corn and cob meal, or corn unground, is bad food alone for sows heavy with young. Sour milk, kitchen slop and vegetable food should be given with it, and for all swine it is to be preferred. In summer, with good clover pasture, pigs will do well without grain, and every farmer should provide a proper pasture for his swine.

We have before stated that sows could be prevented from destroying their young, by giving them rum sufficient to make them tipsy after littering. The preventive of green food would be far better for the animal, as well as of permanent benefit. Sometimes sows refuse to own their young, acting perfectly indifferent to their welfare. We have found this readily overcome by holding the sow, and allowing the pigs to suck once—after which she gave no further trouble.

Country Gentleman.

BEAUTIFUL BUGS.—We have no knowledge of the beautiful bugs sent us by our Berlin correspondent. They exceed in beauty of form and brilliancy of color anything of the beetle kind we have ever seen.

DELEGATES TO COUNTY SOCIETIES.

We have been obligingly furnished by the Secretary of the State Board of Agriculture with the following names of the Delegates who are to visit the county agricultural societies at their annual meetings next autumn.

DELEGATES TO THE SOCIETIES.

Essex, at Danvers, Sept. 28, 29.....Rev. Mr. Sewall.
Middlesex. at Concord, Sept. 28.....E. G. Gardner.
Middlesex, S., at Framingham, Sept. 20. 21.....Wm. Sutton.
Middlesex, N., at Lowell, Sept. 21.....S. H. Bushnell.
Worcester, at Worcester, Sept. 28, 29.....G. M. Atwater.
Worcester, W., at Barre, Sept. 27.....Nathan Durfee.
Worcester, N., at Fitchburg, Sept. 29, 30.....John C. Bartlett.
Worcester, S., Sturbridge, Sept. 28.....Cyrus Knox.
Hampshire, Franklin and Hampden, at Northampton, Sept. 28, 29.....Josiah White.
Hampshire, at Amherst, Oct. 13, 14.....Chas. K. Tracy.
Hampden, at Springfield, Sept 21 22.....M. P. Wilder
Hampden, E., at Palmer, Oct. 4, 5.....W. G. Lewis
Franklin, at Greenfield, Sept. 27, 28.....Jabez Fisher
Berkshire, at Pittsfield, Oct. 5, 6, 7.....Paoli Lathrop.
Housatonic, at Great Barrington, Sept. 28, 29...Geo. Marston.
Norfolk, at Dedham, Sept. 27, 28.....Chas. G. Davis.
Bristol, at Taunton, Sept. 14, 15.....O. C Felton.
Plymouth, at Bridgewater, Oct. 5, 6.....Levi Stockbridge.
Barnstable, at Barnstable, Oct. 5, 6.....Wm S. Clark.
Nantucket. at Nantucket, Oct. 12, 13.....James S. Grennell.
Marth. Vineyard, at West Tisbury, Oct. 11, 12...Simon Brown.

For the New England Farmer.

LETTERS FROM MAINE---No. 4.

Effects of Deep Planting—Season for Pruning—A Mistake Corrected.

In my last, I gave some reasons why trees which have never been transplanted, seem to be hardier and longer lived than those which are started in nurseries, and removed from thence to the orchard. I have now one additional reason to give. Examination will show that trees which grow in the spot where the seed germinated, have a set of roots on which the tree mainly depends, running very near the surface. In transplanting trees, the roots are generally buried deeper than they naturally grow; and in such cases the tree never gets over the deleterious consequences, unless another set of roots springs out near the surface.

Fruit trees winter-kill in consequence of the imperfect ripening or maturing of the sap. The well matured sap has an essential oil so largely incorporated with its substance as to prevent the fatal effects of severe freezing. An abundance of leaves and a supply of roots near the surface of the soil are the essential prerequisites to the ripening of the sap. Hence deep planting and excessive pruning generally prove fatal to the apple tree in Maine, when the winter happens to be more severe than usual.

The correspondents of the *Farmer* have had much to say about the time of pruning trees; and the fact that the sap sometimes runs from the wound made by pruning—blackening and apparently poisoning the bark—has been attributed to pruning at an unfavorable season. This conclusion is based on error. The living healthy wood of an apple tree will not bleed or discharge sap, when cut at any season of the year. It is not sap which seems to run from the wound, but acidulated water from the dead winter-killed wood under the bark. The sap in the bark is better ripened than that in the wood, and hence the wood is often winter-killed when the bark, and

sometimes two or three layers of sap-wood directly beneath it, remain green. When the wood is killed, and the bark only remains green, the tree or branch will leave as usual, and perhaps directly after the flowering season the leaves will wither up. This is more frequently the case with the pear than with the apple tree, and the effect is then called fire blight, &c. In pruning trees, if a branch is cut where the whole of the wood or a part of it has been winter-killed, the water will run from such killed wood, at whatever season of the year the tree may be pruned. I have more facts upon this subject to communicate hereafter. SANDY RIVER.

REMARKS.—Our correspondent says—"The living, healthy wood of an apple tree will not bleed or discharge sap when cut at any season of the year." We are greatly confident that he is mistaken. An extended experience, both as to time and number of trees worked upon, has thoroughly convinced us that if a vigorous tree is cut when the sap is in full motion, that sap will *immediately* flow out, long before there is time for any wood to die, or be winter-killed, or even to acidulate. Upon coming to the air this sap becomes pungent and bitter, and poisonous to the bark and wood over which it flows.

EXTRACTS AND REPLIES.

WATER CRESS.

I noticed in your July number a few remarks by a Salem correspondent, of the value and utility of the Water Cress, recommending its more general use. I can attest, from long experience, to its utility as an edible or early salad, and often wondered that it was not more generally used. I have observed the New York markets are partially supplied early in the spring, from Long Island or Jersey.

Early in the year 1841, I was travelling in the vicinity of New Haven, and observed a fine bed of water cress growing spontaneously, and apparently unnoticed previously. I therefore gathered a bunch, took it home with me, planted or strewed it into a spring of water near my house, and within two or three years from that time, without any trouble or cost whatever, I have had an abundant supply for the use of my family and neighbors. If any of your correspondents should have a clear spring near his homestead he could not put it to any better purpose than make a plantation of water cress—they are not only a perennial, but remain by seed, which deposits and germinates so as to keep a supply. J. WOOD.

Mountain Grove, Bridgeport, Ct.

SPECKS IN BUTTER.

Having noticed in your paper a number of remarks on "White Specks in Butter," I would here give a few words of my experience, never having had the "luck" to have my butter specked, unless I kept my milk too long before skimming, or my cream too long before churning.

The milk should be skimmed before it curdles, and the cream churned before it has either "white or black specks." I agree with "H. E. C.," of Putney, Vt., in "not stirring the cream." The thick sour milk will be settled at the bottom; that I keep from the churn. The cream wants straining, not merely to "get the dirt out" but to break and mix it preparatory to churning. This method I will warrant to keep the "specks" out of the butter. M. E. C.

Warner, N. H., 1859.

THE MANNER OF MOWING.

When, a half century since, I learned to mow model farmers were in the habit of cutting their grass very close to the ground, and those who failed so to do were taunted with being slovenly husbandmen; therefore, when I acquired the skill of shaving off the stubble of the preceding year, and leaving the turf in my swath as smooth as though it had just emerged from a barber's shop, I regarded myself a "crack" mower.

Recently, some of our farmers are getting into the practice of mowing higher. They say cutting Timothy below the lowest joint kills the roots, in case of dry weather immediately after mowing, and they say their attention was first attracted to the subject, from noticing that the grass lands of some of their slovenly-mowing neighbors, held out from year to year better than their own, until they adopted the practice of cutting above the lower joint.

What is the experience of Massachusetts farmers in this matter? VERMONT.

BUTTER-MAKING.

Permit me to express my views, as the result of twenty years experience in the dairy business has shown me that white specks in butter are caused by sour milk being taken off with the cream in skimming, which, by standing with the cream, is hardened, as all sour milk will be. In the process of churning it adheres to the butter in the form of white specks. These are never formed when cream is churned immediately after skimming. C. T. COWDERY.

South Royalton, Vt., July 11, 1859.

For the New England Farmer.

HAY CAPS.

Grain of all kinds may be cut and shocked up at once and capped, and it will not hurt.

I have used hay caps for from fifteen to twenty years, and have always had them keep grain perfectly well.

I have cut grain in the milk, shocked it up at once and let it stand from one to five weeks. I use, or should like to use, caps four feet square. All things considered, I think them best. They will cover from eight to twelve sheaves of wheat and from twelve to twenty sheaves of oats, according to size of bind. Set up the bundles as you would for stooking, except the cap sheaves, then throw the cap over, and pin it down at the corners with pins about eighteen inches long. I do not hesitate to let the rake follow the cradle, and shock my wheat up at once, if the weather looks unfavorable. ED. EMERSON.

Hollis, N. H., July 9, 1859.

A SPLENDID DOMINIQUE FOWL.

We present the reader to-day with the most beautiful illustration of the Dominique cock that we have ever seen. It does not show on paper as coarse as our sheet is, so favorably as it would on that of a finer texture. But it is very beautiful even here. We copy it, by permission, from Mr. C. N. BEMENT'S "*American Poulterer's Companion*," a work which we heartily commend to all persons interested in the raising of poultry. Mr. Bement says,—

"The Dominique fowl, well selected and carefully bred, is a fine and useful bird. They are distinguished as Dominique by their markings and their color, which is generally considered an indication of hardiness and fecundity. They are by some called "Hawk-colored fowls," from their strong resemblance in color to the birds of that name. In England they are usually called "Cuckoo-fowls," from the fancied resemblance of their plumage to the feathers on the cuckoo's breast. We seldom see bad hens of this variety and take them all in all, we do not hesitate in pronouncing them *one* of the *best* and most profitable fowls, being hardy, good layers, careful nurses, and affording excellent eggs and first quality of flesh.

"The prevailing and true color of the Dominique fowl is a light ground, undulated and softly shaded with a slaty-blue all over the body, as indicated in the portrait of the cock, forming bands of various widths.

"The hens are not large, but plump and full-breasted. Their eggs average about two ounces each, are white, and of porcelain smoothness. They are good layers, good feeders, good sitters, good mothers, hardy, and are well worthy of promotion in the poultry-yard."

AMERICAN FARMER'S MAGAZINE.—This excellent journal, under the editorial management of our respected friend, Professor NASH, has been discontinued and "dies," the editor says, "of a collapse in the money drawer." We are sincerely sorry that it has not been better sustained. Prof. Nash is an able writer, an upright and high-minded man. We always read his writings with pleasure and profit, and believe that the farmer will rarely find pages so full of sound and practical instruction as were those of his magazine. We wish him great success in any new enterprise to which he may give his attention.

THE WHEAT CROP OF 1859.

The following article upon the wheat crop of the present year is from the *Metropolitan Bank Note Reporter* of New York. It seems to be carefully considered, and as an estimate of the crops, based upon apparently reliable information, is worthy of attention:

The Wheat Crops.—The wheat crop has generally been harvested throughout the country, and sufficient is known to make a careful estimate of this important staple, interesting for present consideration and important for future reference.

The last official return of the whole wheat crop is from the Patent Office returns of 1855. Using this as a basis, and getting the increase in production from a comparison with the former Reports of the Patent Office, and by the actual investigations made by several of the States, particularly Ohio, we have the means of obtaining approximately from the average amount of land in cultivation for this crop, the yield for this and other years. In this connection it may be remarked that it is found that the average amount of land does not fluctuate like the yield per acre, but like mortality, is governed by certain laws. The average yield per acre every year is only to be found by carefully examining the reports from different parts of the country, etc. With labor we have collected the returns for this year, and give them below in comparison with the returns made out last year for 1857 and 1858, and which we have had no occasion to change.

The production of wheat in the several States for 1858 and 1859 may be stated as follows:

WHEAT.

State.	1857. Bushels.	1858. Bushels.	1859. Bushels.
New York	22,000,000	20,000,000	22,000,000
Pennsylvania	20,000,000	20,000,000	25,000,000
Virginia and North Carolina	20,000,000	18,500,000	20,000,000
Kentucky	10,000,000	8,500,000	11,000 000
Ohio	25,000,000	22,000,000	26,000,000
Indiana	15,000,000	13,000,000	17,000,000
Illinois	18,000,000	14,500 000	20,000,000
Other States	50,000,000	42,000,000	60,000,000
	180,000,000	158,500,000	201,000,000

The production in the Western States, which have the largest surplus for export, is shown by the following figures:

WHEAT.

State.	1857. Bushels.	1858. Bushels.	1859. Bushels.
Kentucky	10,000,000	8,500,000	11,000,000
Ohio	25,000,000	22,000,000	26,000,000
Indiana	15,000,000	13,000,000	17,000,000
Illinois	18,000,000	14,500,000	20,000,000
Total	68,000,000	58,000,000	74,000,000

The surplus for the present year in these States may be estimated as follows:

	Bushels.
Crop 1859	74,000,000
Consumption 5 bushels per head	36,000,000
Surplus crop 1859	38,000,000

It is estimated that in addition to this, from one-sixth to one-fifth of the surplus crop of 1858 is yet in the hands of the producers. We therefore have in the States, estimating last year's surplus crop of the West at twenty-four millions of bushels, as the gross surplus:

	Bushels.
Crop of 1859	38,000,000
Sixteen two-thirds per cent. on 1858	4,000,000
Total for export	42,000,000

The transportation of this at forty cents per bushel will give nearly seventeen millions of dollars to our canals and railroads.

It will probably be thought by many that this estimate of two hundred and one millions of bushels is a large one for the present wheat crop, but we think not. In 1855 the Patent Office returns gave the wheat crop at one hundred and sixty-five millions of bushels; and it is considered as not a large return for that year. In 1855 California was put down as producing only twenty thousand bushels; last year it produced over four millions; and this year probably five millions. In 1855 Kentucky produced only five millions of bushels; it now produces eleven millions. Tennessee has been, except for home consumption, a wheat growing State only since the opening of the Memphis and Charleston Railroad; but now its wheat ranks in quality second to that of no other State. The New England States have decreased in their production, but the West has increased four to one. The amount of land under wheat cultivation this year is thirty-three per cent. greater than in 1855, and the decrease per acre in the production cannot be greater.

It should be remembered that the reports of the failure or excess of a crop are almost invariably exaggerated. It has been found that unless a total apparent failure takes place, the difference between two crops rarely exceeds forty per cent., or between a small crop and an average one, twenty per cent.

The wheat crop in the several States may be considered as harvested and partially ready for market. We can, therefore, give the following returns with some degree of certainty:

In New England the area was not larger than in former years, and the crop is not harvested, but promises, by its superior quality, a return equal, perhaps, to any previous year. In New York the crop is generally excellent, but in some few counties complaint is made. In Pennsylvania and New Jersey the breadth of land and the yield per acre have never before been as great. In Virginia and North Carolina the quality is superior, the land sown rather above the average, and the yield fully ten per cent. over an average and good crop. Tennessee and Kentucky have largely increased their breadth of land sown, and the yield per acre is above the average, while the quality of grain will make their wheat, as in former years, the best in market. In Ohio, the Secretary of the Board of Statistics has prepared careful returns of the wheat crop in that State, and estimates the yield at over 25,000,000 of bushels, showing that notwithstanding the frost, which was more severe in that State than any other, the yield will be larger than ever before by fifteen per cent. In Indiana the same features exist as in Ohio, with perhaps less loss by frost. In Illinois there has been some complaint about the spring wheat, and of all crops in some of the northern counties, but, notwithstanding, the yield will be thirty per cent. greater than ever before. In Iowa there is no com-

plaint made either of yield or quality. In Wisconsin and Minnesota the winter wheat is very fine, and the spring wheat promises well, but is not yet secure. In Michigan complaints have been made, but they have local foundation. In Missouri the wheat crop is secondary to some others, but the press of that State express no dissatisfaction.

With export prices we should doubtless have a movement of the crop never before witnessed, but as this is dependent upon two things, namely, the continuation of the war and poor crops in Europe, we shall perhaps witness no unusual movement. Our people have not, in getting political independence, got, or even learned the value of commercial independence. We are, therefore, dependent upon a foreign demand. If now the producer and the consumer were both in this country, if our manufacturers use our raw material and our producers used home manufactures, we should not have the anomaly of a people almost fearing too large a crop, and hoping for disasters to their neighbors almost, to enable them to sell their surplus. When will we learn wisdom?

RUSTICS NEED N'T KNOW MUCH.

The world has moved a pretty good stretch, in the education of farmers, within the last two centuries, and we hope—indeed we know—that during the next two it will move comparatively a good deal more.

The *Horticulturist*, quoting from "*Philip's Progress of Agriculture*," says that Gervase Markham, who lived at the commencement of the 17th century, wrote a practical work on husbandry, with a view of enlarging the knowledge of the farmers of his day, and laid down what may be considered essential knowledge for them.

He considered reading and writing not very necessary for them to know.

As touching the master of the family himself, learning, he thought, could be no burthen, but as becoming some of the servants, he says, "some servants in husbandrie, as the bayliffe, the under farmer, or any other ordinary accountant, it is not much material whether they be acquainted therewith or no, for there is more trust in an honest score chaulkt on a trencher, than in a cunning written scrowle. And there is more benefit in simple and single numeration in chaulke, than in double multiplication, though in never so fair an hand written." Markham had a curious method of finding how the corn market would open in each month of the year. This was before the days of combination of speculators in breadstuffs.

"If you would know," says he, "whether corne shall be cheap or deare, take twelve principal graynes of Wheate, out of the strengthe of the eare, upon the 1st day of Januarie, and when the harth of your chimney is most hot, sweepe it clene; then make a stranger lay one of these graynes on the harth, then mark it well and if it leape a little, corne shall be reasonably cheape, but if it leape much corne shall be exceedinge cheape, but if it lie still and move not, then the price of corne shall stand, and continue still for that moneth, and thus you shall use your twelve graynes the first day of every moneth one after another, that is to saye, every moneth one grayne, and you shall know the rising and falling of corne in every moneth, all the year following." We suppose the hopping of parching peas in a hot skillet would foretell the price of peas by the same rule.

For the New England Farmer.

VERTEBRATE ANIMALS—No. 2.

The grand division of the animal kingdom called Vertebrates are divided into four classes. The first two, fishes and reptiles, are cold-blooded, that is, they have a temperature about the same as the element in which they live. This depends upon their respiration and circulation. Fishes breathe by means of gills, and their blood is purified only by the action of the small quantity of air held by the water, as it is made to pass through the gills. Reptiles breathe by means of lungs, but their circulation is very sluggish, and compared with the higher classes, but little blood in a given time passes through their lungs. Some reptiles, as the frog, in early life, (tadpoles,) breathe by means of gills. Fishes are universally organized for swimming in water—reptiles for the most part are amphibious—living both in the water and on the land.

The other two *classes*, Birds and Mammals, are warm-blooded, maintaining a uniform temperature in the different seasons, whether the weather be hot or cold. Birds, with fishes and reptiles, are *oviparous*—producing eggs. Mammals are *viviparous*. Birds are organized for flight; but this remark, like many general remarks which we make, has exceptions. The ostrich never rises on the wing, and the wings of the penguin are formed into paddles as nicely as the tail of a muskrat or of a beaver. Mammals all suckle their young. This fact gives them their name. Whales and porpoises are commonly called fishes. They possess, however, all the characteristics of mammals if we express them in general terms. They are warm-blooded, viviparous, and breathe by means of lungs. Their teeth and other organs correspond also with the organs of mammals in their structure. The only thing they have in common with fishes is, that they are organized for swimming. The bat is also a mammal, and not a bird, though it is organized for flight. This *class*, then, seems to be formed in some of its orders to occupy the three elements, the air, the earth and the water.

The *class* of mammals is divided into nine *orders*. We cannot do more than mention them. There are the Bimana—two-handed—including man; the Quadrumana, four-handed, containing all apes, monkeys and baboons; the Carnivora, flesh-eaters, containing cats, dogs, wolves and bears; the Marsupials, animals with a pouch for their young—containing opossums and kangaroos; the Edentata, animals having no teeth in the front part of either jaw, containing sloths and armadillos; the Rodentia, grinders, animals with only two front teeth in either jaw, containing squirrels, beavers and rabbits; the Perchydermata, or thick-skinned animals, including the horse, the hog and the elephant; the Ruminantia, or cud-chewers, containing the ox, the deer and the antelope; the Cetatians, or sea monsters, including the whale and the porpoise.

Each *order* has its *genera*, as the Ruminantia has its Ovidæ, or sheep tribe; its Bovidæ, or ox tribe; its Cervidæ or stag tribe. Each *genus* has its *species*, and each *species* is composed of individuals. We have then the classification which pertains with little modification, to all material objects, each term including the following: kingdoms, grand divisions or departments, classes, orders, genera, species and individuals.

My next number will be upon the nature of species—a knowledge of which is important to every man. O. M.

For the New England Farmer.

THE TAP-ROOT—DECAY OF PEAR AND APPLE TREES.

When a seed of the apple or pear is planted, it throws down into the loose soil a long, slender root called the radicle, and sends upwards a stem called the plumule. The root, however, throws out laterals, and the stem also puts forth side branches. Undoubtedly, the cause of the root making so direct a descent, is the want of moisture, which it cannot find within an inch or two of the surface. How far it would, or should go down for its own welfare, independent of its lateral or accessory roots, is a question. When the young tree is transplanted, it is usually thought advisable to shorten the tap-root, or radicle, so as to multiply the laterals—thereby giving greater power of absorption of vegetable stimulants, as each delicate spongiole has a mouth at its termination, by which it sucks in its liquid nourishment. As the tree advances in growth, we frequently cut off the leading stem to give the top greater expansion. It is generally conceded that the operation does not in any way impair the tree or abridge its life. Does the shortening of the tap-root injuriously violate the tree's natural laws any more? Is the knife more repugnant to it below than above? But it is said the tree needs a long radicle in a drought to reach the moisture of the earth. If such is the case, then the tree has the power to strike one, and probably does so, just as it possesses the power of forming a new vertical stem. In these respects, the plant will take care of itself. There can be no doubt, however, that the roots of a tree are more spreading than the external branches; in other words, that the roots never go down so deeply as the limbs extend upwards. And I very much question, if two old apple or pear trees—one having been planted *without* clipping the tap-root, and the other with it *shortened*—could be taken up with the roots entire, both having had equal treatment, any marked difference could be distinguished. I regard the single long tap-root as a thing pertaining to the tree's early growth, and that clipping it gives it new vitality in transplantation, however the tree may subsequently vegetate or restore itself. Unlike the limb of a man, the vital part of a tree, when shortened, will grow again.

I was led to make these remarks by lately seeing in the *Farmer* some observations deprecating what seemed to be regarded the injurious mutilation of the tap-root; also from an article by Mr. J. M. Ives, of Salem, whose writings no one reads with more pleasure than myself, published in the last Report of the "Agriculture of Massachusetts." Speaking of pears, this gentleman says:

"Most of our newly introduced fruits show symptoms of decay, while many of the old varieties which are scattered here and there throughout New England are still in a bearing and healthy state." Mr I. is disposed to attribute the decay of the pear tree to curtailing the tap-root, to severe pruning, and to the "enfeebling process," practised by Van Mons, by which some of our first varieties have been produced. That we get our best pears at the expense of longevity of the tree, I have sometimes been inclined to believe, though not decided as to this point. The most common and hardy old pear trees we see around us, are the old "Iron," or "Black Worcester" variety. The fruit, as is well known, is not fit, in an uncooked state, for a felon to eat, and no one now propagates it, hardy as it is. The demand at present is, good varieties at all hazards. These old trees were undoubtedly transplanted, as we see them set in order; and if transplanted, they probably lost (intentionally, or otherwise,) a portion of their tap-root, besides having their trunks denuded. They were, of course, grafted, as we do not imagine the Iron pear will re-produce itself from seed. We see a less number of the St. Michael, a very fine fruit when free from cracks; also some Jargonells, Harvards, &c. The St. Michael trees are long-lived, though the pear is now worthless. Sixty years ago, only little attention was given to the culture of the pear; but undoubtedly proportionate failures and decay were difficulties to be met with then as now. We do not see the trees which have prematurely perished, but only those which have lived. A half a century or more from now, it will be something worthy of a record in history, if cultivators do not complain of the premature decay of trees; and they will point to some of those which are now being planted, as evidence that it was not so formerly. Will they not see the Fulton, the Buffum, the Dix, and even the delicate Seckel, besides others of our natives? and also the Vicar of Winkfield, the Louise Bonne de Jersey, the Flemish Beauty, the Glout Morceau, and others of foreign origin? And seeing them in hardy old age, what more natural than for them to conclude that ours was the golden age of fruit culture?

There will always be feeble varieties of apples and pears—it appears to me—whether we preserve the tap-root, and keep the knife and saw from the top or not. And there will always be others which will show their hardy nature in defiance of mutilation. It is true these hardy ones may not always be good, but we feel assured that they need not be necessarily bad, nor the feeble ones, without exceptions, excellent. Diseases and decay are frequently induced by poor culture and bad position; and some seasons, in spite of the best of treatment, the pear tree remains dormant, (even before bearing,) its leaves small and yellow, and its general indication deathly; and then in another year or so, it will make a heavy growth, and all without any obvious reason.

Whatever may be said of the hardiness of seedling pear trees with their tap-roots undiminished, I have not been so successful with some young ones in a nursery row, as with those which were grafted. They are liable to spring blight, uncon-

stant in growth, and I think more liable to be winter-killed—so that I have grafted some stocks and given them a regular course of treatment, to save them from death. The tap-root, surely, is not the stronghold of vitality.

In travelling in the woods and uncultivated spots, I have frequently met with seedling apple trees, of the existence of whose radicle there could be no doubt. They were scraggy, with many low and frightfully decayed limbs, and numerous suckers growing up around their trunks. Occasionally some of their branches will hang full of poor fruit; yet they show little evidence of longevity, or that they would not die of premature old age. Certainly, we do not want such trees as these in our orchards and gardens. No; we need trees which have felt the influence of intelligent cultivation—the mind and hand of man—manure, the saw and the pruning-knife.

Many trees seem to have no central root, but rather roots very divergent and near the surface; yet they grow rapidly. Notice the plum tree, the Ailanthus, and the Abele. If these trees do so well, may we not find encouragement in clipping the radicle of the apple and pear?

But even granting that pear trees are decaying from causes noticed above, have we any remedy? It is true we can preserve the central root in the stocks; but how can we get the best sorts of Europe or of our own land, without we accept of scions that are the result of that "enfeebling process" which alone is supposed to generate a good variety? Shall we use these scions, or shall we fall back upon the enduring tap-rooted trees, with their harsh and worthless fruit?

D. W. LOTHROP.

West Medford, July 15, 1859.

For the New England Farmer.

SECURING CORN—CORN FODDER.

MR. EDITOR:—In the *Farmer* of July 9 I notice an article under the heading of "Corn and Corn Fodder," by J. Wood. He seems to favor the old practice of cutting the stalks, both on account of the grain and fodder and on account of the saving of labor in harvesting. I contend that it is not more than two-thirds the work to harvest an acre of corn to cut it up at the roots that it is to cut the stalks as your correspondent would do. I consider it as much work to cut an acre of stalks, bind and shock them, as it is to cut up the same amount of corn at the roots and bind and shock it. Therefore, I think our friend Wood loses his time and labor entirely in cutting his stalks, for I know from my own experience that corn well secured in the shock will cure as sound and bright as that which is suffered to ripen in the butts. My method for curing corn is this: as soon as the outside husk on the ear begins to turn, I commence cutting. I place from four to six hills in a bunch, after which I bind and put four bunches in a shock. I then turn the tops of the tassels down and bind them, which prevents the water from getting inside the shock. I let it remain from two to four weeks, when it is sufficiently cured to haul to the barn.

I think I have the advantage of my friend Wood in two or three respects; first, in the saving of time and labor, and again in having the stalks and butts together, which is not only a great convenience, but is evidently better on account of their both being cut in a greenish state, while in cutting the stalks only, the stalks are secured green and the butts are allowed to remain till they are perfectly dead and dry, which renders them of little value. Although I disagree with my friend in some respects, I agree with him in others. I fully endorse his practice of feeding his corn fodder in the winter. I make a practice of feeding to my stock one or two bunches a-piece per day, making it last nearly through the winter. My cattle eat it with a relish that assures me it is a pleasant, and I think must be a wholesome diet. W. M. L.

Sullivan, N. H., 1859.

SEASONABLE FARM WORK.

The best season in all the varied round of the year for seeding land to grass, is probably the month of August. The days are long, and if the weather has not been marked by drouth, the land is usually sufficiently moist to make the operation of plowing easy and agreeable. It is a hot season, to be sure, but such advantage can be taken of this, by working early in the morning and a little late at night, as to overcome any objections on this account. It costs something to break up an exhausted field, and re-seed, but it is better economy than to mow over the same land for a succession of years, and get less than a ton of hay to the acre, and that, quite likely, upon the best lands. Let us look at the items:

Horse and oxen 1 day	$3,00
Man and boy	1.50
Use of plow	.25
Harrowing and levelling	1,00
One bushel red top seed	.75
One peck of herds grass	.87½
Six pounds of clover	.75
	$8,12½

An expenditure of eight dollars and twelve cents will put an acre into excellent condition to give one and a half tons of the best hay for six years in succession, at least, with the aid of a little top-dressing. We say nothing of manure, as that is a farm product replaced by the crops.

Now for the items again: The acre just plowed has produced three-quarters of a ton, annually, for the last five years. At $16 per ton this would give $12 a year, or $60 aggregate for the five years, $60,00

The acre newly seeded and properly laid down, will give one and a half tons annually, and at $16, would be $24.

Or in the aggregate	$120
Deduct value of old crop	60
Balance	$60

in five years in favor of reseeding.

Then there is another item of importance in the saving made by working less land,—because if the crop is doubled, it is necessary to cultivate only half as much breadth.

Another item of farm labor for the autumnal months, is that of preparing lands for cultivation. We do not mean to speak now so much of subduing the forest or the swamp, as of clearing up fields that have been cultivated, but which were only partially reclaimed.

That farmer's profits must be large, who can afford to plow, hoe, mow and rake over and around stones that might be sunk or removed. And now that the mowing machine and horse rake have been introduced, it is more important than ever before, that our fields lie smooth and fair, that we may avail ourselves of the advantages which these machines offer.

For removing the large stones that lie in the way in so many of the fine hay-fields of New England, there is nothing that we have ever seen equal to the *Stone Lifter* which was figured in our columns last year, and of whose operations we have once or twice given an account. There should be one of them in every rocky town in New England. With this machine, a stony field of ten acres may be cleared in two or three weeks, and the stones laid into a substantial wall, and we think this may be done at less than one-half the cost it would require to do the work in the common way, with powder, iron bars and oxen. These machines have been taken into New Hampshire and Vermont, and we advise our friends to avail themselves of the first opportunity to see with their own eyes what they are capable of accomplishing.

There are some other items of autumnal business which we will speak of at another time.

For the New England Farmer.

EXPERIMENTS WITH THE CORN CROP.

I send you the following note copied from the Secretary's Report on Massachusetts Agriculture, Abstract of Returns for 1858, page 203.

"Mr. Solon Carter, of Worcester North Agricultural Society, reported the last year, his experiment of the year 1856, with the following result, viz., Three lots of one hundred hills each, the date of harvesting, husking and shelling being the same. After husking, the ears were spread about six inches deep, and remained so until shelled.

Lot No. 1—Cut up whole and stooked. Weight of ears, 189 lbs.; of corn, 139 lbs.; of cobs, 24 lbs.; shrinkage, 26 lbs.; 14 per cent.

Lot No. 2—Top stalks cut. Weight of ears, 200 lbs.; of corn, 155 lbs.; of cobs, 26 lbs.; shrinkage, 19 lbs.—9½ per cent.

Lot No. 3—Left standing whole. Weight of ears, 196 lbs.; of corn, 141 lbs.; of cobs, 23 lbs.; shrinkage, 32 lbs., or 16 per cent.

As in 1856, so now, the corn which had the top stalks cut, weighed most at harvesting, and shrunk least before shelling.

The lots for the above trial were selected by Col. Philips, when examining the field for the committee of which he was chairman."

For the New England Farmer.

VISIT TO MOUNT HORRID.

Mr. Editor:—After the labors which confine us to the drudgery of farm-life for the spring are accomplished, it is sometimes delightful to wander away into the solitudes of nature, and enjoy communion with the bright scenery of earth, which is so beautifully seen from those elevated peaks of the Green Mountains, spreading far and wide on each side of the green hills of our childhood; those enchanting elevations, which excited our curiosity in our youthful days, but where in riper years we behold

"This elder Scripture, writ by God's own hand,"

illustrating the changes of our planet since its primary form in the incandescent state. O, what a mighty change does the infinitude of a past eternity impress upon the mind! Yet, now, the same workings of natural law, and the same forces, are elevating one part of our globe, and depressing another; and yet, the unmatured mind sees no change in all this wreck of matter and crush of former worlds,—while the beauties of the landscape spread out before his vision, with all its enchanting scenes of light and shade, awake no emotions in the soul, send no thrill of joy to the heart; and even when we call on those people who live on the skirts of this beautiful mountain, and have wandered o'er these hills from boyhood's happy days, we find no emotions of delight exhibited, and an utter ignorance in directing us where we can go to enjoy these beautiful views of landscape and mountain scenery. Here we were left to take our own course, and find our way to the summit of Mount Horrid, as best we could.

It was on the beautiful morning of the last day of May, that our little party, consisting of four, started from Brandon at about eight, A. M., on a visit to Mount Horrid—that awful looking escarpment which lies a little north of the gorge, through which the road passes from Brandon to Rochester. We rode to the highest habitation of man on this side of the mountain, and there left our team and pursued the journey on foot. The morning was clear and the air salubrious at the time of starting, with all the prospects of a bright and sunny day; but before we reached the summit of the mountain, we observed the forming cirrus faintly intercepting the brilliant light from the golden god of day. At noon we stood upon the utmost height of the gorge, on the highway south of Mount Horrid. Cirrus had begun to obscure the sky, and soon there appeared a solar halo of unusual brightness. We were neither weary nor hungry, but intended to dine on the margin of some crystal rivulet near the summit of Mount Horrid. We were now in sight of that rocky escarpment which lies to the north from where we stood. We stood at the termination of a hill, bearing a north-westerly direction, and connected with the western side of Mount Horrid. Then up its eastern slope and across a rocky chasm, we wended our way to the rocky ruins beneath Mount Horrid.

Here, it seems, nature in her wildest mood scattered her rocky ruins in the most fantastic manner. Here, the frost of ages has been crumbling the rocks from the brow of this awful eminence, and scattering them in rich profusion on

the side of the valley below. Above us, fire had done its work of destruction, and the bodies of the scattered spruce forest were strewed over the barren and broken rocks, far above the rich foliage of the valley below. But where did these monarchs of the forest grow? There was no soil save here and there a crevice, filled by the torrent formed by some mighty shower; and carried from the realms above. Here, perhaps, the lightnings of heaven have spent their fury, and sent their thunderbolts among this rocky mass.

Ascending about half way up the rocky eminence, and looking down, we saw one of the pigmy inhabitants of this lower world, travelling down the mountain turnpike in a one-horse buggy. Huge rocks grew steeper at every step; we clung to the decaying arms of the giant but prostrate spruce, and climbed the rotten trunks over the rocky defile. At last the summit of Mount Horrid was beneath our feet. With a telescope we saw farms and farm-houses, scattered far to the eastward, while in the distance lay the imposing outline of the White Mountains of New Hampshire. South of us, and across a deep valley, stood another mountain of equal height with Mount Horrid, clothed in the most beautiful foliage. The woodman's axe had apparently never rang through its solitudes, and its beautiful foliage will probably bloom there for many years to come.

The rocks are of a coarse, granular texture, composed of several ingredients, of which silica is one of the principal; hornblende and felspar, I think, enter into its composition, with a very minute quantity of mica. They appear to be unstratified, metamorphic rocks, ground down to small particles, and again cemented in a solid form. Here was a delightful region for a botanist. Thousands of wild flowers beautified the scene, and such a carpet of soft, velvety moss, does not exist in the lower regions of earth. This might with propriety be called the region of moss, for it was the most luxuriant growth I ever saw. It was above the region of maples, and the principal growth of timber was spruce and birch, with a small variety of shrubbery. I gathered a few wild flowers, promiscuously, for samples, but they were dead and withered before I arrived at home. As near as I can judge from the withered specimens, the little modest flower dedicated to the immortal Linnæus shone conspicuously upon Mount Horrid—the Linnea Borealis or twin flower. It is the first time, I think, I ever saw this little modest flower, and it brought to mind the memory of the celebrated founder of the Linnæan system of botany.

I left the summit of Mount Horrid about three, P. M., and wended my way in a southwesterly direction, toward the foot of the mountain. When part way down, I came to an opening in the forest, where with the telescope I had a splendid view of the landscape far to the westward. Yonder, in the distance, lay Lake Champlain, with its bright and shining waters, like a long white ribbon of silvery brightness, stretched on the verdant landscape, while nearer lay Lemonfane, like a bright gem, amid the surrounding scenery of green foliage. In the far-off distance lay the blue and rugged forms of the Adirondack Mountains, whose lofty summits have an imposing look, as they lay piled up beneath the dark canopy of heaven. Long ere this the sky was overcast with clouds, the token of an approaching storm, which had gathered gradually through the day. They wore a smooth aspect, like the approaching nimbus, but did not entirely obscure the sun, when I left our beautiful station on the mountain's side. I then started homeward, but before I arrived, a few sweet drops fell in advance of the approaching storm. My journey was delightful, but far too short to study into the mysteries of nature. Every flower had but a passing notice, and every rock a cursory examination. My time was far too short for the purposes of scientific investigation. D. BUCKLAND.

Brandon, Vt., 1859.

THE NIGHT BEFORE THE MOWING.

All shimmering in the morning shine,
And diamonded with dew,
And quivering with the scented wind
That thrills its green heart through—
The little field, the smiling field
With all its flowers a-blowing,
How happy looks the golden field!
The day before the mowing!

And still 'neath the departing light—
Twilight—though void of stars,
Save where, low westering, Venus sinks
From the red eye of Mars;
How peaceful sleeps the silent field,
With all its beauties glowing,
Half stirring—like a child in dreams—
The night before the mowing.

Sharp steel, inevitable hand,
Cut keen—cut kind! Our field
We know full well must be laid low
Before it fragrance yield.
Plenty, and mirth, and honest gain
Its blameless death bestowing—
And yet we weep, and yet we weep,
The night before the mowing!

For the New England Farmer.

A NON-BEARING ORCHARD.

I suspect, Mr. Editor, that your correspondent "E.," who complains, in the *Farmer* of July 16 that his thrifty orchard of apple trees does not come into fruit-bearing, is like too many fruit-growers—too impatient. If his trees are, as he says, twelve inches in diameter on twelve years' growth, they are, indeed, very thrifty trees, and the reason why they do not bear is to me very plain. *They are making wood, instead of making fruit.* When they have come to their growth, or nearly so, they will bear all the better for not bearing now. It is the opinion of experienced nursery men, and I fully coincide with it, that early fruiting is, as a general rule, an indication of disease in a tree. Some varieties, it is true, come into bearing earlier than others, without showing indications of disease, but, as a general thing, early bearing trees are smaller in size at maturity, and shorter lived, than those of more tardy development of fruit-bearing qualities. It is often the case that a young apple or pear tree will "take to fruiting" for a number of years, and for the time, nearly cease its growth of wood; then it will stop fruiting, "take to growing," and

become a good sized tree before it bears another particle of fruit. It seems to be out of season that trees should grow thrifty and fruit heavily at the same time; and my advice to your correspondent is, to wait patiently a few years longer, and let his trees grow. They are doubtless paying a much better interest on the investment, in that way, than by an earlier development of fruit. If they are of the kinds which ordinarily bear well, there is little danger but that they will, in a very few years more, amply repay all the patience and care which their owners may devote to them.

I know there are exceptions to all rules, in fruit-growing, as in everything else. There are some soils, though they are very rare indeed, which will not apparently produce apples or pears. It is generally supposed that such soils lack entirely the ferruginous principle. Perhaps if your correspondent would try the experiment of scattering iron filings, or cinders from a blacksmith's forge, freely around two or three of his trees, digging them freely into the earth so that they may come in contact with the roots, he may soon ascertain whether his soil lacks the essential element of iron. I have known iron spikes driven into plum trees, to produce fruit when they had long been apparently barren; the iron acting, evidently, as a kind of *tonic* to the sap. But the instances are very rare in which thrifty, well cultivated trees, of the right varieties, fail to produce fruit at the proper stage of their growth. E. C. P.

Somerville, Mass.

A FINE GRAIN SIFTER AND ASSORTER

There is a great deal written and said now-a-days about agricultural education, and agricultural colleges, just as though a young man could be put through a course of academic instruction, and then through the routine of college learning, and be turned out upon the world a good farmer, or in fact, a good anything else. Few men ever reach the quarter-deck excepting through the forecastle. Genius outruns mere learning every day, and gathers the harvest, while learning, or book education, merely, lags behind. But genius and learning combined, master all things.

The idea extensively prevails that it is hard work, year in and year out, *that makes the farmer*,—hard hands, neglected dress and contempt of refinement. This, too, is all folly. At his work he should have whole, but strong and substantial garments suitable to the occasion,—but at church or town-meeting, why should not his dress be as fine and fashionable as any respectable person wears?

Then the farmer should be something of a merchant, too, understanding the qualities of the products in which he deals, their prices, and how best to arrange and prepare them for market, in order that they shall return him a fair profit.

We are acquainted with two men occupying the same range of land, and their farms opposite each other, who happened to carry one hundred and eighteen barrels of apples, each, to market the same fall, and during the same time. One of these men got a certain sum for his apples, and the other got just $118,00 more, or an average of one dollar per barrel more! One had sufficient mercantile skill to lead him to assort his crop into grades, put them into clean and uniform barrels, and fix a price upon each class, and in consequence of this skill realized nearly double that his neighbor did on the same amount and quality of article.

We saw a man in South Market Street the other day, sifting beans, and as he seemed to have an interested audience about him, we joined the group to look, listen and learn. He had several barrels before him and a sort of tray-like box made of pine board, and filled with wire sieves. He rattled his sieves and chatted fluently about his business, telling his audience that he purchased the lot of beans before him, had sifted out *four* bushels of defective and small ones, worth as much as four bushels of the best yellow corn, and had sold the remainder for what the whole lot had cost! It had taken him two hours to do the work, and he had realized $2,00 an hour for his labor! These are but examples of one kind of learning which the farmer needs. Boston market is the best institution in which to acquire it, of any that we are acquainted with. Such was the train of thought suggested by witnessing the operations of our friend, the bean assorter.

We had a further curiosity, however, to gratify, beside listening to his speech. The little machine—if machine it could be called, that had not a bolt or screw in it—was before us, and on examination we found that the operator could mix half a pint of *twelve* different kinds of seeds, such as marrowfat, blue pod and pea beans, split beans, peas and split peas, coffee, buckwheat, rye, oats, linseed and grass seed, and in less than two minutes from the time the mixed contents were put in, they were again separated and discharged into twelve boxes with almost unerring certainty.

If these simple contrivances were in common use among farmers, what a mass of unsaleable oats, barley, wheat, rye, buckwheat, coffee, rice, peas, beans, &c., might be kept at home and fed to stock, the cost of freight to market, and frequently back again, saved, while the good article, separated from the bad, would bring more money than the whole, when sold together.

An Oswego, N. Y., dealer brought a lot of beans to Boston market, and in consequence of imperfect cleaning up, and of shrivelled beans, they were unsaleable. He passed them through a sifter and assorter, got out six bushels of defec-

tive beans, and then found a quick sale at a high price for the remainder.

These sifters are made and sold by Mr. SANFORD ADAMS, Lincoln Street, Boston, who is a hard-working, ingenious man, and who has probably never eaten a pound of bread or meat since he was six years old, before he had earned it. We wish he had eight or ten platoons of young *gentlemen* and *ladies* under his charge, who think they have a right to eat and drink without first having earned what they eat or drink.

For the New England Farmer.

ANALYSIS OF SOILS---MANURES.

You hear, everywhere, from men learned, perhaps, in some branches of knowledge, but who never have experimented in agricultural chemistry, that agricultural science is merely this:—Analyze the plant and see what are its elements; analyze the soil, and see if the ingredients of the plant are there, and if not, supply them. This is seemingly easy to comprehend, and seemingly easy to execute; and many farmers have thought that their sons could learn to be their own practical chemists in one, or at most, two terms at an academy. I think that the establishment of nominal agricultural departments in our little academies have encouraged the idea; though in the end it must have the reverse effect. Agriculturists should be disabused of this false notion, and know that it requires as much time to learn to make reliable analyses, as it does to acquire the legal knowledge necessary for a lawyer, or the medical knowledge necessary for the trusty physician.

When the student of agricultural science is able to make reliable analyses, and hardly till then, can he understand the difficulties of the task he has undertaken. He will find that chemical analysis alone cannot enable him to direct with any considerable certainty, the best method of treating a particular soil—no man can do it. The chemical reactions in the soil are so complicated, and so little is known of the manner in which plants grow, that science, in its present state, cannot positively decide the matter. We quote upon this point, Prof. G. W. Johnson, of Yale College, and Consulting Chemist to the Connecticut State Agricultural Society. "He says:—"We are every day drifting further from what but a few years ago was considered one of the most fixed and beneficial principles of agricultural science, viz.: that a substance is chiefly a fertilizer because it directly feeds the plant, and are learning from the numerous recent and carefully conducted experiments with manures, that in very many cases we cannot safely venture to predict what will be the influence of a given application; but find in practice the strangest and most discordant results, it being literally possible to show from the experience of the farm that almost every fertilizer in use has in some instances proved beneficial to every cultivated crop, and in other cases has been indifferent or even detrimental." "We are, therefore, compelled more and more to regard the indirect action of manures." This indirect action refers to the changes that take place between the elements of the fertilizer and the elements of the soil. To illustrate, we quote an example which he has given: "Wolff found that the ashes of the straw of buckwheat, grown with a large supply of common salt, (chlorine and sodium,) compared with the ashes of the same part of that plant grown on the same soil, minus this addition, contained less chloride of sodium, but much more chloride of potassium; there having occurred an exchange of basis in the soil." The chlorine had changed from the sodium of the salt to the potassium of the soil. This may explain the various effects of gypsum. If it is put upon a soil in which an ammonia salt will be decomposed and the ammonia set free, it is beneficial; but if it enters into other combinations, or remains inactive, it will be, as it very frequently is, of no value.

We would not, then, have the agriculturist expect too much, on easy terms, from science, nor would we have him expect too little. Do not think that because science blunders, and is not sure-footed, that it is worth nothing. It is young and not perfected; but already, it has taught much that is valuable to every man that has a rod of land, and there is hardly a man in New England but has been more or less instructed, though unwittingly.

Do not think because your sons cannot become masters of chemistry in a term or two, it does them no good to study at all. They need a knowledge of chemistry to understand fully the article we have written, and so much can be given at an academy or high school. There is much knowledge that can be given by a competent teacher, in a single term, to a class in agriculture. To have it valuable, the teacher should not be a mere book man, a theorist, but one who has applied his science. O. M.

Wilbraham, Mass., July 21, 1859.

CLEAN MILKING.—It is sometimes forgotten that the last gill of milk drawn from the cow's udder is the best part of every milking. Careful experiments made in England show (according to a report lately published,) that "the quantity of cream obtained from the last drawn cup from most cows, exceeds that of the first in the proportion of twelve to one." The difference in the quality also is considerable. Hence, a person who carelessly leaves but half a pint of milk undrawn, loses in reality as much cream as would be afforded by six or eight pints at the beginning; and loses, too, that part of the cream which gives the richness and high flavor to his butter.

PAINTS.—Pure paint is always better than adulterated; most of the grinders of white lead and white zinc grind these pigments with sulphate of baryta; avoid such paints. The baryta cannot hold the oil and soon rubs off. In painting wagons, plows and other implements, use no spirits of turpentine. Wait a little longer for the paint to dry, and it will last longer when dry. Use pure linseed oil, and none of the patent rosin oil mixtures. For many utensils, common shellac varnish answers as well as paint, and maintains the original color of the wood.—*Working Farmer.*

AGRICULTURAL REPORT OF PLYMOUTH COUNTY.

Every Secretary of an agricultural society who has attempted to make up a report, can fully sympathize with the worthy Secretary of the Plymouth society, in his remarks upon the statements of committees and competitors. It is too often true, that "very few statements of any accuracy or importance, come into the hands of the Secretary."

"Let it be understood now and always, both by the exhibitor and the committee man, that our agricultural societies do not, and were not designed to give premiums alone for the accident of a fat ox, or a fat field, or a twenty quart cow, but they give a premium in return for some information accompanying the ox or cow, as to the *how*, the *when* and the *wherewithal*, which is what the farmers want to know, and which alone, in the reports of the society, can be of any benefit o the community." This is the true doctrine, and we are glad to see it made prominent by the Secretary.

The committee on premiums appear to have caught the spirit of this officer, for we notice that three competitors for premiums on grain crops, lost their premiums by not sending in their statements seasonably.

Plymouth has a high reputation for its large grain crops. Its corn crops have never been excelled in the State, and we are glad to see an attempt to place the yield of this crop on a basis which shall prevent all doubt hereafter, as to the accuracy of the reports. The corn is to be shelled in January, and weighed, allowing *fifty-six* pounds to the bushel. Mr. G. P. WOOD'S corn, raised in 1857, was estimated by harvesting, and weighing two rods, at *ninety-eight* bushels per acre. On being shelled and weighed in January, 1858, it yielded 75 15-56 bushels, of fifty-six pounds each, which shows a great shrinkage between harvesting and January.

Fine crops of barley and oats were also presented and received premiums. We have no doubt that the successful cultivation of grain crops in this county is due, in great measure, to the liberal premiums that have for many years been paid for them. We are glad to notice that premiums were awarded for the skilful manufacture of the largest quantities of compost manures. CHARLES G. DAVIS and JONATHAN HOWARD were well entitled to the premiums they received, and especially for the accounts they furnished of their methods of operation. An interesting essay upon the culture of corn, by that sound farmer, MORRILL ALLEN, will repay perusal.

Two married ladies and three single ones displayed themselves on horseback, no doubt to the gratification of most, if not all, the young men and boys assembled. Eleven premiums were awarded for the exhibition of flowers, nearly all of them to ladies. We do not hesitate to record it as our opinion, that a beautiful bouquet, or basket of flowers, is a more appropriate exhibition for a lady, than the exhibition of her person on a fast horse before a gazing crowd.

The report closes with a list of premiums offered for the year 1859. We notice that this practice is becoming common, and it strikes us as a good arrangement. The only objection to it is, that the meeting of the Trustees must be held, before the report can be got out. But, perhaps, this is the best way. With the incidents of the last exhibition in their mind, the Trustees will be better able to make arrangements for the coming one.

For the New England Farmer.

GRAPE VINES WHICH CAN NEVER BEAR.

Most persons are aware that a flower is perfect in structure when the stamens and pistil or pistils are present. It matters not whether the corolla, that brilliant circle of colored leaves, which in popular language is called the flower, be present or not; a flower is perfect in structure when the organs which are essential for the production of seed are present, and these organs are the stamens and pistils. Classifying by structure, we shall find most of the finest flowers of our gardens are very imperfect, their elegant double nature being gained at the sacrifice of the stamens, which by a beautiful metamorphosis, have changed to petals; on the other hand, a classification founded on structure increases our interest in many trees and plants. Few, probably, are aware of the most abundant flowering of the elm tree. These flowers precede the leaves, and while some wonder at the interval which elapses between the bursting of the dark brown bud and the appearing of the leaves, that noble tree is centering all its energies in performing the most delicate and intricate work of the round year, the perfecting of the organization of its myriads of seeds.

The statement that stamens and pistils are all that are necessary to form a true flower, may appear to some merely a theoretical truth, possibly of some value in science, but of no practical value. If this be so, I would ask such an one to explain how I can sustain the absolute assertion made at the head of this article, viz.: That there are grape vines that cannot bear? And this statement can be made as absolutely of strawberries and other plants as of grape vines. Nature is no waster of her recources; with her the primary end of our edible fruits is to protect the seed, and therefore, if the parts necessary for the perfection of the seed are not present, rarely, if ever, shall we find fruit.

For several years we have had growing upon our trellis two seedling grape vines, which had been selected for the superior vigor of their growth from a large number of seedlings. All of

these seedlings had produced specimens of fruit, but these two, which bloomed most profusely, as yet would never set a grape. Struck by the phenomenon of vines abounding in fragrant blossoms without setting fruit, I gathered the blossoms and compared them with those from fruit-bearing vines. The difference was at once apparent; the blossoms of the two vines which had never borne were not perfect in structure; the stamens were present, but the pistil was wanting. Such vines cannot bear—it is a physical impossibility. Had the pistil been present they might have borne, though the stamens had been wanting, receiving pollen from the stamens of other vines; as it was, the only practical use that could be made of such vines was to use them to impregnate other vines with a view of obtaining a larger variety of grapes from the seedlings to be raised from them.

I have thought, Mr. Editor, that the fact that some of the most vigorous seedlings are non-bearing vines might be new to some of your readers, and be a fact worth the noting by those enterprising men who are now engaged in raising new varieties from the seed.

J. J. H. GREGORY.

Marblehead, Mass., 1859.

EXTRACTS AND REPLIES.

NIGHT SOIL — SAND ON MUCK LANDS — FOWL MEADOW AND BLUE JOINT GRASS SEEDS— TALL OAT GRASS—MEADOW FESCUE.

I wish to know if night soil is injurious to land?

I have been told that sand put on low land in quantities is injurious. Is it so?

Where can I buy fowl meadow and blue joint grass seed, and at what price?

How much seed per acre, and what other seed would do well on moist land that can be plowed?

Nashua, July, 1859. J. C.

REMARKS.—Pure night soil is too pungent and quick for any crop. Well mixed with loam or muck, there is little danger of using too much of it.

So much sand may be applied to a wet piece of land as to keep out the action of the sun and air, and stifle it, so that it will remain inert for years. Every operation on the farm requires, not experience, only, but the exercise of a sound judgment. We once knew a good farmer to cover a piece of muck land with sand, and in order to make a capital thing of it, he put the sand on four inches deep all over it; the consequence was, an inactive, dead piece of land partially covered with a minute, greenish moss. The land was imperfectly drained, and was kept moist by showers and capillary attraction, so that there was just enough of the breath of life in it to clothe it with the vegetation we have just mentioned. Low, black muck lands are greatly benefited by the application of sand,—but it must be applied judiciously, in proper quantities, and spread evenly upon the surface. Half an inch to one inch in depth is sufficient for a coating that will operate beneficially for several years.

You can purchase any of the grass seeds at Nourse & Co.'s, 34 Merchants' Row. Fowl Meadow Seed is $4,00 per bushel—Blue Joint $2,25. Mr. Gwinneth, the seedsman of that establishment, thinks one bushel of the fowl meadow, and the same of the blue joint, would not be too much for an acre. That would be expensive seeding—but if the crop were allowed to ripen occasionally, the land would keep seeded for many years. There is very little fowl meadow or blue joint grass seed brought into market.

The Tall Meadow Oat Grass and the Meadow Fescue would probably be good grasses to mix with the fowl meadow and blue joint.

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SUPERPHOSPHATE AND GUANO.

At what season of the year should superphosphate be applied to produce the greatest effect upon grass land? How should it be applied to corn—after it comes up, as we apply plaster, or put into the hill and covered before planting? Upon what kind of soil does it produce the most beneficial results? I wish to make the same inquiries about guano. A. R. S.

Cornwall, Vt., 1859.

REMARKS.—Apply guano or superphosphate in the spring on grass land during a wet time. Upon corn put it into the hill. They are useful on any soils that we plant corn on.

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HOW TO MAKE GOOD BUTTER.

Skim the milk as soon as it sours, and before it thickens, if possible; stir the cream faithfully, especially when new is added. Set the jar in a cool place; if the cellar is not cold and sweet, set it in the spring, or hang it in the well—any way to keep it cool. After the last cream is added before churning, then "go a visiting" if you please, as cream should not be churned the day it is taken off. At night fall, fill the churn with cold water, and start the churning at early dawn and my word for it, you will soon find a solid mass of golden-colored butter, free from white specks, and when properly salted and packed, fit for the table of our friend the *Farmer*, or any other.

N. B. After the buttermilk starts, pour in cold water, a little at a time, turning the crank slowly and carefully back and forth; this prevents the butter from closing too rapidly, does not break the grains, and gives every particle of the cream a chance to form into butter.

"In a multitude of counsellors, there is safety."

AUNT RHODA.

North Cambridge, Vt., July 25, 1859.

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TO CURE KICKING COWS.

My way is this: if a cow kicks when I am milking, I slap her smartly with my hand two or three times or more upon the flank, and speak sternly to her, and do this at the time, never for a moment leaving her, keeping my hold of the

teat if possible; when she becomes quiet I caress her with the hand, and soothe her by gentle words, thus letting her know what I want. This will, I am sure, prove effectual, for cows are like school-boys, who, if they know they can overrun the master with impunity, will continue to do so. A cow once thus subdued will become gentle and docile. E. F. B.

Enfield, Mass., July 25.

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EFFECTUAL REMEDY FOR POISONED SHEEP.

Open the sheep's mouth and with a sharp-pointed knife, bleed the sheep in the third or fourth bar or ridge from the entrance of the mouth, and the work is done, and a cure effected without pining away or loss of flesh, as in most other remedies. I have applied the above remedy to several sheep that were flat on their sides and appeared lifeless, and have not lost one sheep. E. G. ALLIS.

Whately, Mass., July 26, 1859.

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TRANSPLANTING EVERGREENS.

Seeing a paragraph in your columns from one of your subscribers concerning transplanting pines or evergreens, I will give my plan. As early in the spring as possible, I selected a few small trees from the woods, (a pine, a hemlock and cedar,) and took them up with the native soil which adhered to them, and planted them near the house. I gave them a little attention, keeping them well watered, and I have now the pleasure of seeing them prospering finely.

GEORGE C. LAWRENCE.

Vineyard, Winchester.

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PICKLES.

Will any one who knows, tell me how, with good cider vinegar and cucumbers, I can make pickles that will keep hard the year round, without salting them down? I have tried it several times and in a little while they grow soft and are unfit for use. A LOVER OF GOOD PICKLES.

Putney, Vt., 1859.

REMARKS.—The "cook-books" give directions how to make pickles, but we believe people generally consider that salting cucumbers is the best mode of keeping them for a long time.

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A RUPTURED COLT.

I have a mare colt, six weeks old, that has a bad breach at the navel. Can you, or any of your readers, tell me what to do for it? If a pad can be put on to do any good, how must the rigging be fixed to keep it in its place? The opening through the membrane is nearly an inch and a half in length. W. C. B.

Putney, Vt., July, 1859.

IOWA FARMERS' COLLEGE.—This institution has been located in Storer county, thirty miles north of Des Moines city. The site is said to be one of the most beautiful to be found in the State. There are 640 acres of land connected with the buildings.

For the New England Farmer.

TOPPING CORN.

Some of your contributors differ relative to the practicability of cutting off the tops of corn.

My limited experience in the culture of corn, much inclines me to favor the practice of cutting off the tops at an early day. The reasons for so doing in brief are as follows:

As soon as the corn is full, remove the top. The hot sun soon sears the cut end of the stalk, and what supply of nourishment was intended for the top, is saved for the ear; consequently, the ears will ripen fuller than it otherwise would. If the tops are removed previous to the high winds accompanying autumnal storms, the corn will be partially, at least, protected and saved. The corn will ripen sooner, and, I think, sounder.

The tops will be worth double what they otherwise would be to remain until the corn is sufficiently ripened to put into shocks.

The sugar contained in the stalk is its real value. The sooner the top is cut after it attains its full growth, the more is saved. If suffered to remain, nearly all of its value, escapes by evaporation.

True, if you cut up and shock before the corn is quite ripe, you save a trifle in the value of the butt stalks; but not enough to compensate for the loss in the top stalks. The increased labor in tying up and shocking will quite balance that of topping.

Georgetown, Mass., 1859.

MILDEW AND FRUIT.

MR. EDITOR:—My friend, Mr. Saunders, of Philadelphia, says that the cracking of the pear is the result of a species of mildew, and it may be found that applications of sulphur water will be a surer prevention of this disease than those special manures which have been recommended, and which have not been found to remedy this evil, or give indications of a curative process.

The peculiar mildew seen on the foreign grape under glass, on the gooseberry, lilac, &c., is induced by atmospheric aridity. This mildew develops in the form of a moldiness on the upper surface of the foliage, and frequently extends and envelopes young growing shoots, in which case the bark seems to contract and crack into lengthened openings. Here can be traced a close resemblance to the cracking of the pear, going far to prove that it has the same origin. In sheltered city yards, where drying winds are arrested in their sweeping progress, and where a quiet and more humid atmosphere prevails, the foreign grape will frequently attain to a fair perfection.

So also the White Doyenne pear is annually produced in its greatest perfection on trees similarly located, while in open exposures a few miles distant a fair specimen cannot be procured. No reason that has ever been brought forward on the probable cause of pear-cracking is so philosophical, or so much in accordance with recorded facts, as that which connects it with mildew. The mildew seen on the native grape is apparently a different fungus from the above. Here the "under" side of the leaf is attacked, destroying the vitality of the tissue, which is then ten-

er, and is speedily scorched by the sun, and the leaves decay and wither. When this occurs during the ripening of the crop, the sudden loss of foliage prevents it from maturing, and hence many bunches will show one-half the fruit black and the other green. This apparent scorching is most noticeable during the months of August and September, when heavy night dews are succeeded by hot sun, or after a few dull or rainy days.—*Prairie Farmer.*

BUDDING.

Budding, or inoculation, is the same as grafting in its effects, as in both cases the young shoot starts from a bud. It is performed at a different season, and usually on small stocks. It has the advantage of grafting in the more rapid multiplication of a variety, in being more expeditious, in allowing, frequently, of a repetition the same season, in case of failure, and of the operation without injury to the stock, and it is surer than grafting on stone fruit. It is the most common mode of propagation in nurseries, but it is not much practised on large trees, nor even on small standards, (excepting stone fruit, peaches in particular,) as grafting is preferable.

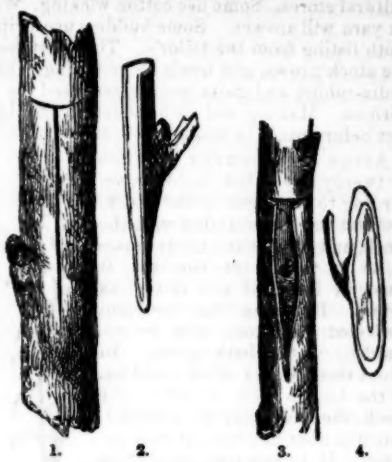
SUBJECTS FOR BUDDING. — Stocks or limbs from ¼, ½ or ¾ of an inch in diameter are suitable for budding, and even those of an inch will answer, but they are more proper for grafting. It is of great importance that the stock be well established and in vigorous condition, that it may send up a strong, straight shoot, forming a good trunk for a standard, else it will be stinted and scraggy, and difficult to form into a good tree.

TIME FOR BUDDING. — Much depends on various circumstances, such as age and thrift of the stock, the weather, the season, &c. Judgment must be constantly exercised, (and then we may fail,) for we can no better set an exact time for budding than for cutting grain in future years. In this climate, if the stocks are young and of common vigor, and the season and the weather as to moisture about as usual, the time for budding is generally from the 1st to the 25th of August.

Stick of Buds.

PREPARATION OF SCIONS. — As soon as the scion is cut, trim off the leaves, leaving about one-third of an inch of the foot-stalks, else the leaves, which transpire moisture rapidly, will absorb it from the buds, and quickly spoil them. In hot, dry weather, they may be spoiled in this way in two hours.

If the scions are to be used soon, wrap them in a damp mat or cloth, or, for convenience, put them in fine grass or leaves, and wrap in paper. To send a distance, pack in damp moss, or in damp sawdust, in a box. To keep awhile, wrap up or pack as above, and lay in a cool place, in the cellar, or bury a foot deep in the ground, in a cool, shady place. They will keep longest in the moss or sawdust. They may be kept several days in grass or leaves, and a week or more in moss or sawdust.



1. 2. 3. 4.

1. The stock prepared for the bud.
2. The bud with the wood taken out.
3. The stock with the bud inserted.
4. The bud with the wood in.

MODE OF BUDDING.—The most common and the best is T budding. With a sharp budding knife, make a perpendicular slit, just through the bark, about an inch long, then a cross-cut, in the form of a letter T. It is well to make the cross-cut in a circular form, that the band may cross the cut. With the ivory at the end of the handle-knife, raise the bark a little at each corner, below the cross-cut. If one has not a budding-knife, this may be done with a piece of sharpened hard wood or with the knife-blade. Lift up the bark, not force the instrument between the bark and wood, and disturb the *cambrium* or new layer of soft matter.

Hold the but of the scion from you, and insert the knife about one-half an inch below the bud that is next the but-end, and with a gentle curve cut about to the depth of one-fourth the diameter of the scion—more in small, soft or rather green scions, and less in large scions of firm and ripened wood—and bring out the knife about half an inch above the bud. Then put the bud under the bark, and slide it down the vertical slit till the bud is a little below the cross-cut; then, if any of the bark remain above the cross-cut, cut it off there, making a neat fit. Some make the cross-cut below the perpendicular slit, and run the bud upward, but this is less convenient, and no better.

The bud tied in.

Wind the matting closely around the stock, so as to cover all the vertical and transverse cut, barely leaving the bud uncovered; tie with one bow-knot on the same side as the bud. Bud on any side excepting the south, where the sun may injure the bud in warm days in winter.

BANDS.—Mats such as are used around furniture, new and strong, are cut into suitable lengths and used for bands. The soft, pliable, inner bark

or rind of any trees, like bass or linden and elm, is good. Suitable materials can be had at agricultural stores. Some use cotton wicking. Woolen yarn will answer. Some budders use strips of cloth listing from the tailor's. This stretches as the stock grows, and needs no loosening. Sheet India-rubber and gutta percha are used by the curious. Matting and such material should be wet before used, to make it soft and pliable.

AFTER MANAGEMENT.—In ten or twenty days after budding, according to the vigor of the stock, the bud will have united with the stock, and if the band binds closely, so as to cut into the bark, it must be loosened and re-tied as before. If the bud has dried and shriveled, the stock may be rebudded, if the bark peels. In about three weeks after budding, if the bud is well united to the stock, the band may be removed. But if it does not bind, it may remain. If it remains on during winter, the ice is more likely to gather around the band and injure the bud. As the bark of the cherry curls, the band needs to remain on longer than on other stocks.

Growing bud.

In the spring, from the bursting of buds to the leaves becoming half size, cut off the stock in which the bud is good, to within two or three inches of the bud, and when the bud has started, tie it to the stump, if it inclines off. Keep down the sprouts; and in July, cut off the stump even with the bud, and keep down sprouts and suckers.—*Cole's American Fruit Book.*

For the New England Farmer.

AN ANCIENT TREE.

Yesterday, in company of friends, I visited the renowned Endicot pear tree. I found it vigorous in growth and fairly loaded with fruit, of medium size; not yet matured. The tree now consists of many sprouts from the shell of the trunk, rising to the height of twenty feet or more. The trunk has a hollow appearance, indicating that the original tree was about two feet in diameter. Tradition says that it grew to the height of 40 feet or more. If my reccollection is right, a sketch of the appearance of the tree was furnished a few years since for the *N. E. Farmer*, by your observing correspondent, Mr. S. P. Fowler. As it is beyond doubt the oldest *fruit-bearing tree* to be found on our shores, having been in bearing condition more than *two hundred years*, all reliable acts relating to it are worthy to be recorded.

I could not but regret that the fence, which twenty years ago, or more, was erected for the preservation of the tree, has fallen into a dilapidated condition; which together with the overgrown weeds and meagre crops about, impressed me fully with the belief that the estate had fallen into hands that "knew not Joseph." The site of this Endicot farm is one of the most picturesque and beautiful in the county; and it is a disgrace to the name, that it should be left in a condition so abandoned. P.

July 29, 1859.

For the New England Farmer

THE IMPROVEMENT OF LAND

BY FEEDING OUT ITS PRODUCTS AND GIVING BACK THE MANURE.

BY FREDERICK HOLBROOK.

It appears to me that, generally speaking, the great aim in farming, here in New England, should be, to devise and perfect ways for expending the various products of the soil upon the farm, so as to get about as much for them in the growth of stock, the meats, dairy products, or wool, &c., into which they have been converted, as though they had been sold off for money; thus giving back to the land the manures the crops may make, increased in quantity, of course, by all judicious modes of composting with them the various unemployed or waste vegetables and other substances of the farm which contain the elements of fertility.

The mistake has been, and still is, too common, of selling off a considerable proportion of the grain crops especially, and converting them into money. If any surplus were left after paying debts and expenses, that has generally been invested either in the purchase of more land, or at interest, or in stocks and other property outside of farming. The farm thus not receiving back a sufficient compensation for the products it has borne, has been undergoing a gradual waste of fertility, and generally has not been as profitable to the owner as it would have been under a more generous cultivation. Indeed, his income, from all sources, is perhaps less than if he had invested more from year to year in the improvement of the soil, looking to a highly cultivated farm for dividends, and less in merely added acres, or in stocks and other outside property. Cases are not rare of men who have worked hard, during the best working period of their life, to get enough income from their farms, over and above expenses, to make an annual investment of money at interest, or in some kinds of stocks, so as to have something, as they term it, laid up for a wet day, or for old age. But the difficulty is, they have been exhausting the farm by so doing, and as life advances and they find themselves less able to labor on the land, the farm is less productive than when they were young, will not reward labor as formerly, and much hard and discouraging work must really be done to get a tolerable return from the investment. They are not so well situated to live easily and pleasantly in old age, and, perhaps, their income or resources, all told, are not as good as though larger investments had from time to time been made in the improvement of the soil, the farm growing more and more productive, and requiring less hard labor than formerly, in proportion to the income derived from it.

There may be instances where it is best to sell off the products of the farm to a considerable extent, and purchase town manures; and this course will do, provided enough manure is bought to compensate the land for bearing those products. But in by far the generality of cases the farmer must mostly rely upon the manure made on his own farm.

The hay and coarse fodder are generally mostly fed out on the farm, but often the principal

part of the grain is sold off directly for cash. Now I have the impression that in the long run, all things considered, it might be better to feed out the greater part of the grain along with the hay and other forage, and let the income of the farm be derived mainly from the stock. The grain fed with the forage adds a peculiar essence or strength and activity to the manure heap, is emphatically "the leaven which leavens the whole lump," and has a very marked influence in increasing the products of the farm generally. The land will be more productive in every kind of crop than if the grain were sold off, and it only got back the colder and less fertilizing manure made simply from hay and coarse forage.

After a few years of this kind of feeding, the products of the farm will be so much increased that considerable more stock can be kept on it, which will, in turn, make more manure for the land. These influences will work back and forth one upon the other, so that in fact the business will grow more and more profitable, and the income will increase more in proportion than it will be necessary to increase the investment. There are hardly any limits to the productive capacity of our farms, if we will only study out ways of expending our crops judiciously, and making the most of the manures they will return to the soil. Sections of country may be pointed out in Europe, not naturally more favored for soil and climate than our own, where the land has been cultivated for hundreds of years, and is now more productive than at any former period, and far more so, acre for acre, than the very best virgin soils and lands of our own country. Another thing deserving particular consideration, land that is in high cultivation, and is judiciously cropped, can be kept at a high mark of fertility with ease, as compared with making exhausted land fertile. The very luxuriance of the crops gives back a large mass of roots and stems to the soil. Especially is this the case when a grass sward has been allowed to form; so that in breaking the sod for a new rotation of crops, we can turn under many tons per acre of matter fertilizing to the land, contained in the roots and stems of the sward. Then, too, land in high condition is much less injuriously affected by unfavorable peculiarities of the season, as to drouth or moisture, cold or heat, than if it were in poor tilth, and indeed is in a good degree independent of these peculiarities. In any season, it will pay a larger profit in proportion to what has been expended to obtain the crop, than can be derived from exhausted land.

In feeding out the grain crops pretty freely on the farm, there will be some years when the growth of stock, the meats, the wool, the dairy products, &c., into which the grain has been converted, will sell high enough to pay considerably more per bushel for the grain than it would have brought had it been sold off the farm; other years the grain may perhaps bring a greater immediate income if sold off; but taking one year with another, and considering the steady improvement of the farm, where the crops are expended upon it, there will be more profit in feeding out the grain than in selling it off. In a period, say of twelve or twenty years, I am inclined to think that seventy-five cents per bushel realized for corn, for instance, fed out on the farm, and the manure returned to the land, is as good as one dollar per bushel, realized by sending it off to market for cash, and the farm robbed of an equivalent in manure for the corn thus sold off.

Take, for instance, the whole amount or number of bushels of grain of any kind produced on an acre of land, or on the farm, and place it in a pile together. It makes only a small heap, even though the yield per acre be a very large one. Yet that heap, small as it is, contains a large per cent. of the very essence of the fertility of the soil that produced it, and has taxed the land far more than if it had only produced the stalk and leaf of the plant, or in other words, a forage crop of any kind. This grain, fed out with the hay and other crops, adds wonderfully to the activity and fertilizing power of the farm-yard manure, and greatly quickens the soil to renewed efforts at production. Then, again, by feeding out the grain with the forage crops, and thus making manure abounding in gases and salts, you may compost with it much larger proportions of muck, turf, the rich soil washed into hollow places, or other materials gathered up about the farm to swell the manure heap, and have them all decomposed and sweetened and prepared to become the food of plants, than you could properly use if the cattle-droppings were alone composed of the more lifeless and inactive elements derived only from hay, straw and other forage.

Mr. Coke, the late Earl of Leicester, once said, "the more meat a poor land farmer sent to Smithfield, the more grain he would be enabled to sell per acre at Mark Lane. Convert plenty of corn and cake into meat; for the value of farm-yard manure is in proportion to what it is made of. If cattle eat straw alone, the dung is straw alone, the cattle are straw, the farm is straw, and the farmer is straw—and they are all straw together."

Not long ago, I had four cows come up to the stable in the fall, which I thought might yield a good supply of milk through the winter, if well fed. I also had four other animals, cows and heifers, which were not expected to give much milk till the following grass season. The first four were tied in the stable side by side, and received each, in addition to hay and stalks, four quarts of small potatoes each morning, and two quarts of corn and oat meal each evening, through the winter. As was expected, they gave a good mess of milk, and came out well in the spring. The manure of these four cows was thrown out of a stable window, under the cattle shed by itself. The other four animals were tied in the same stable, next to the first four, and received only hay and corn-fodder. Their manure was thrown out by itself, at the next stable window, and under the same shed, so that the two heaps lay side by side. The heap made by the four cows that were daily messed with potatoes and meal, kept hot and smoking all winter, and was wholly free from frost. The heap made by the other animals that had only hay and stalks, showed no signs of fermentation, and was somewhat frozen. Observing this difference from time to time, curiosity prompted me in the spring to apply these two heaps of manure separately, but in equal quantities, side by side, on a piece of corn ground. The superiority of the corn crop, where the manure from the messed cattle was

applied, over that where the other heap was spread, was quite apparent and striking; and called my attention, more particularly than it was ever before directed, to the importance of feeding out our best or richest products, if we would have the best kind of manure for our lands and large crops from them.

I might here go on to show that the hay produced by the farm, fed out upon it, and say, seven to eight dollars per ton realized for the same, and the manure given back to the land, would generally, in a term of years, be as valuable thus disposed of as though it were carried off to market and sold for twelve dollars per ton, and the land not compensated by an equivalent of manure. Also, how the feeding of potatoes, carrots, and other root crops adds to the quantity and quality of the manure, and the profit of keeping stock. But these matters would form another branch of the general subject, the treatment of which would make this communication too long.

It may be proper to briefly indicate some of the ways in which the grain crops may be profitably fed out upon the farm, though I can no more than barely mention them at this time.

It is generally good farming to keep at least a few cows, for their dairy products, and in connection with them, about an equal number of spring pigs of a good breed, feeding the skim milk, &c., of the dairy to the pigs, together with grain. When pork brings seven cents per pound and corn one dollar per bushel, I have found it better to feed the corn to March pigs of a good breed, slaughtering them at nine or ten months of age, than to sell the corn off for cash. By supplying the pigs with suitable materials, they will make each five or six ox-cart loads of first rate compost. The pork thus made will bring about a cent per pound more than pork of the average quality in the markets, and meat of the roasting and steak pieces will be about as tender and delicate as that of the breast of a chicken. The skim milk thus fed adds much to the growth and general thrift of the pigs, and is worth a considerable per cent. of what the new milk would bring if sold off the farm for cash. In addition to what is realized from the pigs, there is the value of the dairy products and the manure derived from the cows.

It often proves profitable to buy up, in the fall, weathers of a good breed of mutton sheep, feeding them a portion of grain along with hay and other crops, say till into March following, and then selling them to the butchers. The grain and hay thus fed out will generally bring more money, in the improved pelt and carcass of mutton, than though they had been sold off directly for cash, and there is the manure left to give back to the farm. Then again, sheep manure is peculiarly active, and inclined to fermentation, and mixed with the other farm-yard manures, it quickens the effects of the whole upon the soil and crops. I might say more about this, but must pass on.

There is the feeding of cattle for beef, which has always been successfully practised; and every farmer knows how much more powerful is the effect upon the soil of the manure from fatting cattle, than that from cattle which only have hay and other forage.

It is generally quite profitable to rear young cattle of a good breed, for their growth and improvement, feeding them a little grain along with the forage crops. Their growth and general improvement often pays a large profit on the cost of making it.

There is the keeping of sheep, to a greater or less extent, for their wool and increase; where things are right for keeping a flock of sheep, how they will make the farm shine!

But I have not space to extend these remarks about feeding. In some of these, or other ways, the principal part, at least, of the grain and other crops of the farm may, generally speaking, be more advantageously fed out, and the manure they will make given back to the land, than to sell them off so largely as is often done. And I think a farmer had generally better have his capital mostly invested and actively employed in farming highly cultivated land, and in good stock, feeding out his crops on the farm, and deriving his income through the stock, than to have it partly in a poor, run down farm, and partly, perhaps, in money at interest, or in stocks and other outside matters.

Brattleboro', July 29, 1859.

For the New England Farmer.

A TERRIBLE WHIRLWIND

Mr. Editor:—The most violent and destructive whirlwind ever known in these parts, passed through Groton, on the 26th ult. It was a most terrible sight to behold, and powerful almost beyond comprehension. It was sure destruction to every movable object with which it came in contact. My informant, who saw it at its first start, says: "Two opposite winds appeared to meet; the clouds rolled together with terrible force, roaring like some mighty water-fall. Suddenly, there appeared to rise from the earth a black cloud, which, taking an easterly direction, whirled and rolled like the smoke of some great conflagration. The whirlwind was now under full headway; in a few moments the air was filled with branches of trees, then small trees, and finally it increased to such force, that trees apparently two feet in diameter were wrenched from the ground and whirled into the air, like so many shingles or straws. Its path was but a few rods in width, and its course very irregular—first to the right, then to the left, and bounding like a ball."

At length, as it neared the village, it struck a new and commodious carriage shop, belonging to Mr. Almond Clark. Mr. C. and a number of workmen were in the building when the wind struck it; luckily they all got out uninjured; one, however, being a little behind the others, jumped from the door after the building was six feet in the air, and landed in the cellar. The building was carried several rods, and completely smashed to pieces. Before the building started from its foundations, one of the men saw some large stone which lay near, taken completely up and carried several feet. It required two yoke of oxen to draw the stone. Mr. Clark's loss is estimated at seven or eight hundred dollars, the machinery alone costing about half that sum. The whirlwind next struck the upper part of the Methodist church—the hill on which it stood breaking the force, or rather, it bounded upwards,

for its force was not yet abated, and completely uncovered one side of the roof, and breaking in about half the windows, besides otherwise injuring it; probable damage fifty dollars. After leaving the meeting-house, the whirlwind was too high to do any very serious damage, until it passed over the village, although even then it moved every article in its way, which a high gale of wind would scarcely do.

Its next demonstration of power was on a high hill back of the village. It struck two barns belonging to Mr. Whicher, (if I mistake not,) and completely demolishing one, and unroofing the other, besides doing some damage to his house, and tearing up almost every tree in his orchard; and himself and hired hand came near going the same road that Elijah of old did, but however, they managed to keep on terra firma, except their hats, which they knew it was useless to look for. The wind did no farther damage, except the destruction of fences and timber. After leaving Mr. W.'s, it struck Ryegate Mountain, which probably stopped its wild career, as we hear of it no farther.

We are having a hard drouth: the pastures are all dried up, and most of the springs, as well as the cows, corn and potatoes. Hay is mostly harvested, and is good; grain is fair. T. P. B.

South Ryegate, Vt., August 2, 1859.

A FARMER'S SONG.

We envy not the princely man,
In city or in town,
Who wonders whether pumpkin vines
Run up the hill or down:
We care not for his marble halls,
Nor yet his heaps of gold,
We would not own his sordid heart
For all his wealth thrice told.

We are the favored ones of earth,
We breathe pure air each morn,
We sow—we reap the golden grain—
We gather in the corn;
We toil—we live on what we earn,
And more than this we do,
We hear of starving millions round,
And gladly feed them, too.

The lawyer lives on princely fees,
Yet drags a weary life;
He never knows a peaceful hour—
His atmosphere is strife.
The merchant thumbs his yard-stick o'er—
Grows haggard at his toil;
He's not the man God meant him for—
Why don't he till the soil?

The doctor plods through storm and cold,
Plods at his patient's will;
When dead and gone he plods again
To get his lengthy bill.
The printer, (bless his noble soul,)
He grasps the mighty earth,
And stamps it on our welcome sheet,
To cheer the farmer's hearth.

We sing the honor of the plow,
And honor of the press—
Two noble instruments of toil,
With each a power to bless,
The bone and nerve of this fast age,
True wealth of human kind—
One tills the ever generous earth,
The other tills the mind.

For the New England Farmer.

COAL ASHES.

A few years ago I was impressed with the belief that anthracite coal ashes possessed no little manurial value; hence I placed it in liberal quantities around apple trees and a few currant bushes. I thought they gave some vigor to the latter; but of this I am not confident. Upon the trees I could perceive no effect.

Coal is supposed by geologists to be the result of vegetable compression and decay, or transformation—although this doctrine is questioned. At any rate, it appears to us with more of the characteristics of a mineral than of anything else. The late Prof. Norton analyzed a peck of the ashes of white ash coal, and found only about twelve per cent. of it soluble in acid. Of important fertilizers—it contained only twenty-two parts of one per cent. of soda; fifteen of one per cent. of potash; and eighty-six of one per cent. of sulphuric acid! Nevertheless, some European analyses have shown a better result. The coal across the waters must certainly be richer than ours.

My experience has taught me this. If the soil is in any degree light, it better not be used; because it will accumulate in the soil, and so little of it being soluble, it will show itself for years, without doing any good; for its mechanical effects, in rendering the soil more porous, on such land, is not needed. But if the soil is heavy and cold, its tendency will be to improve it, by making it lighter, besides adding whatever of fertilizing matter it may possess.

From the above, it will be seen that I entirely disagree with your correspondent F., of July 30th, who advises it upon light lands. No doubt coal ashes are a disinfectant. So is virgin, or even common soil, and perhaps a better. But a special disinfectant around trees, or upon grass land, is quite useless, unless it will arrest the ammonia or nitrogen of the atmosphere, and this, probably, coal ashes will not do.

W. Medford, Aug. 1. D. W. LOTHROP.

REMARKS.—See article among selected items in another column.

MAINE STATE AGRICULTURAL SOCIETY.—The Fifth Annual Show and Fair of the Maine State Agricultural Society will take place at Augusta, on the 20th, 21st, 22d and 23d days of September next. There is to be a thorough trial of plows, and a heavy silver medal is offered for the best one in each class. Manufacturers can send their implements on any line of railroad, or forward by any steamer in the waters of the State without charge. We learn that the Trustees have made the most careful and liberal arrangements for the show, and mean to have it excel any other that has taken place in the State.

☞ Vice and folly may feel the edge of wit, but virtue is invulnerable; aquafortis dissolves the base metals, but has no power to dissolve or corrode gold.

AYRSHIRE BULL, "ALBERT."

We present, above, a portrait of the Ayrshire bull "Albert," recently imported and owned by the Massachusetts Society for Promoting Agriculture. The cut is taken from the new edition of Flint's "Milch Cows and Dairy Farming," just issued by Phillips, Sampson & Co.

In our January number, page thirty-three, we gave a portrait of an Ayrshire cow, and also copied Mr. Flint's description of the breed and its qualities. We will not here repeat that description, but copy the following remarks with regard to the superiority of this breed for dairy purposes:—

"The Ayrshires have been bred with reference both to quality and quantity of milk, and the grades are usually of a very high order. The best milkers I have ever known, in proportion to their size and food, have been grade Ayshires; and this is also the experience of many who keep dairies for the manufacture of butter and cheese, as well as for the sale of milk. A cross obtained from an Ayrshire bull of good size and a pure-short-horn cow will produce a stock which it will be hard to beat at the pail, especially if the cow belong to any of the families of short-horns which have been bred with reference to their milking qualities, as some of them have. I have taken great pains to inquire of dairymen as to the breed or grade of their best cows, and what they consider the best cows for milk for their purposes; and the answer has almost invariably been the Ayrshire and the native. The Ayrshires have by no means been a failure in this country, although I do not think that, as a general thing, we have been so fortunate hitherto as to import the best specimens of them. If any improvement has been made in our dairy stock apart from that effected by a higher and more liberal course of feeding, it has come, in a great measure, from the Ayrshires; and, had the facilities been offered to cross our common stock with them to a greater extent, there can be little doubt that the improvement would have been greater and more perceptible.

It should, however, be said, that in sections where the feed is naturally luxuriant, and adapted to grazing large animals, some families of the short-horns crossed with our natives have produced an equally good stock for cheese and milk dairies."

For the New England Farmer.

HOW TO BUILD UP A HOME.

MR. EDITOR:—Four years ago a shopmate of mine being convinced that his constitution was fast breaking down from the confinement and close application to his business necessary to afford him and his family a living, conceived the idea that he would invest the saving of years in the purchase of a small farm, in the hope that the out-door labor appertaining to the *profession* of a tiller of the soil might be the means of prolonging his days, as it was evident that a twelvemonth more of in-door labor would completely incapacitate him for work of any kind.

Having but little money at his disposal, he went into the northern part of the State and made purchase of a small farm of thirty acres, for which he paid six hundred dollars.

He stocked it with two cows, horse and wagon, pig, a few hens, and these, with a small amount for the necessary tools to work the place, consumed the entire amount he could call his own. After getting comfortably settled, he turned his attention to the collecting and making of

manure, he having the good sense to know that the earth would produce nothing unless kept alive. Of course, the first year was rather tough scratching, but in the second, by manuring *large* and planting *small*, he succeeded in raising comparatively remunerating crops.

The manufactories of the town in which he has settled offered a light and profitable employment to the females and children that compose his family, sufficient to furnish the dry goods and groceries needed.

In the meantime his stock had increased, and, best of all, he had entirely recovered his health and youthful vigor, and was to all intents and purposes younger by twenty years than when enjoying the cool and shady workroom of a city mechanic. I have just returned from a visit to his New England home, and I wish to describe the condition in which I found him after four years' experience in the life of a farmer. In the first place, his family, eight of them, are in the possession of *perfect health*, and as happy and contented as any persons I ever saw. He has made many improvements in the buildings, such as painting, shingling, &c., and has added by purchase twenty acres of excellent mowing land, on which he owes but ninety dollars. His stock consists of seven as fine cows as the town affords, (so the assessors say,) four yearlings, horse and colt, two likely looking pigs and four hundred and sixty hens, the eggs of which find a ready market among the boarding-houses, store and tavern three miles distant. He put sixteen tons of hay into the barn, the past fortnight. He is so "wedded to a country life" that he informed me that five thousand dollars would be no temptation for him to return to Boston and give up the real freedom and independence that he now enjoys. He finds ample time to read the *N. E. Farmer*, and other agricultural works, obtainable at the library in the village. He believes in book-farming, and is assured that in his case he should never have succeeded without reading the ideas and experience of others.

"BRICKS AND MORTAR."

Boston, August, 1859.

REMARKS.—Your friend is a good fellow—a trump. Long may he live to enjoy his happy home and the fruit of his skilful labor. We hope his excellent example will be widely contagious.

TRANSACTIONS OF NORTH MIDDLESEX AGRICULTURAL SOCIETY.

This report commences with an address by Rev. F. HINCKLEY, of Lowell, and a good beginning it is. The address is written in a beautiful style, and is full of sparkling thoughts and human sympathy. The report is got up in a brief, business-like manner. The amount of premiums awarded was $765,15. The reports of committees and competitors are very short, and do not convey as much information, or contain as many practical suggestions, as they might. Upon such subjects we need line upon line and precept upon precept. Committees should not hesitate to express their thoughts and make such remarks as occur to them, because they have been expressed by some other persons, upon some other occasion. They may reach some minds that have not seen them, and prove like good seed upon good ground. We say to all agricultural committees, scatter your thoughts broadcast. They will bear good fruit.

For the New England Farmer.

BUTTER-MAKING.

Much has been written of late in various agricultural journals concerning "white specks in butter," and hardly two writers can be found that wholly agree: some assigning the cause to the process of churning, and others to various other causes—a few giving the true theory.

Under ordinary circumstance there is no need of having "white streaks" or "specks" in butter. The streaks are generally the result of the insufficient working of the butter, the salt not being evenly diffused. The white specks, as several writers in the *Farmer* have already stated, are curds of sour milk, the result of skimming in too much milk and letting the cream stand too long before churning, or by getting milk with the cream that is already sour. No harm whatever results from scraping down the cream into the churn as the butter begins to come; the cream thus scraped down, if not converted into butter, remaining in the buttermilk.

To prevent white specks in butter, let the milk always be skimmed before it sours, if possible; if not, after the milk has coagulated and the curd become solid, removing the cream carefully; churn the cream as often as every other day, through the hot season, and in extreme heat, every day, if the quantity be sufficient, and if properly worked and salted, I will warrant sweet, pure butter with no white specks. Such, at least, is the experience of an old and experienced butter-maker, whose butter has the credit of being the "very best in the market." The process truly is a simple one, and it only requires attention to always ensure good butter. Stirring the cream at every time of skimming, to mix it, should be avoided.

The old practice of washing butter I am inclined to consider not only useless but pertaining to the barbarous, and worthy of being discarded in every well conducted dairy. The prime object of the washing seems to be the complete removal of the butter-milk, but a certain change in the butter seems to be wrought at the same time, for it is true that butter thoroughly washed will often keep in good order but a short time, however sweet when first washed. The better way to remove the butter-milk is by working with a wooden paddle, previously well moistened in water to prevent the butter from sticking.

Springfield, August, 1859. J. A. A.

☞ *Three times as much corn, per acre, as any body else can raise.*" If Mr. S. D. BAKER, of Mansfield, Mass., will inform us, in the first place, how he will accomplish the result stated above, we can then decide whether it will be best to publish his challenge, or NOT.

PREPARATION OF SOILS FOR CROPS.

In its genuine signification, the term agriculture means nothing more nor less than the artificial preparation of the soil for the annual production of those vegetables, which, in the various climates of our globe, are required for the sustenance of man and beast. It is, however, properly and naturally divided into two distinct branches, designated, respectively, by the terms, "*chemical*" and "*mechanical*"—the former having reference to the application of those energizing and ameliorating substances which tend to the immediate increase of its productive qualities, by imbuing it with the nutritious properties and juices of animal and vegetable excrements; or by calling into vigorous and effective action those elementary properties, with which, in a state of nature, it is originally enriched. The latter has reference to the "*tillage of the soil;*" and the amelioration of the earthy constituents, by the thorough pulverization of its elementary particles—a result ordinarily effected by plowing, digging, or otherwise lightening its texture, so as to afford a favorable medium for the establishment and ramification of the roots of such productions as it is required to sustain, whether belonging to the class of "roots" or "grains."

By the scientific agriculturist, manure is recognized as operating in two ways: first,—by imparting to the soil those fructifying and emendatory jucies or principles of vegetable power, of which it was before deficient, and which are essential to the healthy development and sustenance of plants; secondly, by the action it induces among the minerals constituting the earthy part of the soil—effecting their decomposition and re-combination under new features, and imbuing them with new energies more expressly adapted for the immediate sustenance of the growing crop. There are certain substances, which, when applied to the soil, seem obviously to produce but one of these results; while others applied for the same common or general purpose, appear to produce both.

When the agriculturist applies animal excrement, or mineral water of any kind, to the soil, and an increased crop is the result, he logically infers that the application has benefited, or, in other words, has *enriched* the soil.

This, indeed, is the primary object aimed at,—yet, it may be important to the practical agriculturist to ascertain, somewhat more definitely, the specific action of the substances applied; to know, in short, what description of manure or matter may be best adapted to certain crops, as well as what kind will be most permanent in its effects upon the soil. The laws of chemistry in association with those of geology and mineralogy, unfold to us the theory of manures, and the *modus operandi* of their application. "It is only by such assistance," remarks an able writer, "that we can account for various facts of much practical importance, and which, to all appearance, are contradictory. And by this means, only, shall we be enabled to make a prudent and judicious selection of those materials which are used for the enrichment and fructification of the soil when worked for the benefit and happiness of man."

We are all aware that to be productive, with reference to any given crop, the soil on which that crop is grown must contain certain peculiar properties. Lands fitted for the growth and maturation of wheat, for instance, are considered valuable, because the wheat crop is one of prime importance.

Now if we examine soils richly endued with the principles essential to the growth of this grain, we shall find that they contain certain elements of vegetable re-production in much larger quantities than those soils in which it does not succeed. Popular attention has been directed to this subject in Scotland, and Dr. Anderson, the chemist of the "Highland Agricultural Society," has made several analyses of the wheat soil of that country, a tabular exhibition of which, published in the number of the Society's Journal for May, 1850, shows the following results. The soil was, in this instance, from a field in Midlothian. One hundred parts of the surface soil gave 6.789 of "combustible dry matter or mould," containing,

Carbon	4.500
Hydrogen	0.215
Oxygen	1.806
Ammonia	0.268
	6.789

By "surface soil," the reader is here to understand that portion which is considered the medium of the roots of vegetation, or the first ten inches from and below the surface. The *poorest* soil subjected by Dr. A. to analysis, gave the following result:

Carbon	0.714
Hydrogen	0.033
Oxygen	0.286
Ammonia	0.089
	1.122

Two parts of ammonia in a thousand may appear a small quantity, yet it will be found on examination, that as an acre of soil, ten inches deep, weighs one thousand tons, there are over two tons of ammonia in the soil of every acre capable of producing a good crop of wheat. Now a heavy crop of wheat appropriates, or requires for its full development and perfection, about sixty pounds of ammonia.

There is, however, a mixture in nature's crucible which we have no power as yet to imitate;

for if we make the most accurate analysis that is possible of a soil, and find in what elements it appears to be deficient, and supply them liberally, we are by no means certain that we shall secure a good crop of wheat. There is still something beyond the skill of the chemist, but something, happily, within the reach of the farmer to supply, that will usually bring a good crop,—and that is plenty of barnyard manure!

EXTRACTS AND REPLIES.

HOW SHALL I RESTORE MY RUN-OUT GRASS LAND?

I have a piece of English mowing land, situated between the upland and meadow, which seven years ago bore bushes, brakes, and the like; since then it has been plowed and planted one year, plowed again and sowed to grass seed. Four crops of hay have been taken off since, the first very heavy, the last very light.

Can anything be done to this piece of mowing land the present month, without plowing, (as it is well and evenly laid down with the land around it,) so that I may secure a good crop of hay for three years, or more? If so, what?

Hamilton, Mass., Aug., 1859. X.

REMARKS.—Plowing and re-seeding, in our opinion, will be the quickest and most economical mode of reclaiming the piece of land you speak of. In common with most of us, you have probably made two mistakes with it. First in not topdressing a little annually, or at least every other year, and secondly, in not allowing the herdsgrass to ripen one year so as to re-seed itself. The herdsgrass and red-top roots are gone, and top-dressing will not restore them. Plow, manure and re-seed, and then keep up the crop by a fair course of manuring.

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REAPERS—SLAKING LIME.

Is Ketchum's machine a good reaper as well as mower?

In composting lime with muck, should the lime be slaked with water or by the air? MAPLE.

Caledonia Co., Vt.

REMARKS. — Ketchum's machine is intended for reaping as well as mowing—but may not be as good as a machine with a reel.

There is no difference, we believe, between lime slaked with water or air slaked. The latter is as much slaked with water as the first, but the process is slower. —

PEARS.

Among the varieties of this fine fruit which have been raised, there are comparatively few that are equally good in Massachusetts; from these, if requested to name six of the best, ripening in succession, I should name the Bloodgood, Bartlett, Belle Lucrative, Beurre Bosc, Winter Nelis and Lawrence. These will generally do well in all good soils; the Belle Lucrative is, however, of a higher flavor when grown upon a warm, loamy soil, than upon one of a heavy, retentive nature. J. M. I.

Salem, Mass., 1859.

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HOW TO MAKE GOOD BUTTER.

I have noticed in several numbers of your excellent paper an article treating on specks in butter. The mystery I think I can solve at once. I have lived on this earth half a century and always been in the habit of making butter since I was fifteen years of age. And from experience I found a preventive a great many years ago. I can take the cream from curdled milk and put in a trifle of salt and stir it around the jar with a paddle that I keep for the purpose, and repeat it every time that I add cream, and I will never be troubled with white specks in butter. As to straining cream it seems to me to be entirely useless, if it is properly cared for. In order to have butter sweet and nice, cream ought not to be kept more than three days in hot weather, nor more than six in cold weather.

M. M. SPAULDING.

Cornish, N. H., Aug., 1859.

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BUTTER MAKING.

White specks in butter are sour milk turned to a hard curd; and are caused by the milk or cream being kept in too warm a place.

Cream that remains in the churn after the butter has come, should be put into the cream-pot again; if put back into the churn, it will enrich the buttermilk, but will not form the white speck; if the churn is made as it should be, there will be no cream remaining in the churn, unless the cream is very thick. Put sweet cream into the churn with that that is sour, and you will lose the sweet cream, as it does not come to butter so soon as the sour, but does not injure the butter; cream should be taken from the milk as soon as it is sour enough to be removed without milk, and in warm weather should immediately be put in the cellar, or where it can be kept as cool as possible; churn once a week, but the oftener the sweeter the butter. After removing the cream, you may skim off as much more that will be rich enough for biscuit, making a saving of all your cream for butter. L. C. POTTER.

Leyden, Mass., 1859.

N. B. Lettuce makes excellent greens—boil half an hour.

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ACTION OF PHOSPHATES.

I am much pleased with the remarks of Judge French about phosphates, analyses of soils, and the like. It is high time that we back out from scientific nonsense, such as is taught by many a would-be professor, and take up the lessons of practical common sense. If it be true, as averred by Mr. F., and admitted by Prof. Mapes, that there are some phosphates that nourish plants, and others that do not, all of which are composed of the same chemical ingredients, then what reliance can be placed on chemical laws, for the advance of vegetation? None at all, until demonstrated and illustrated by experiment.

Aug. 1, 1859. P.

ISABELLA GRAPE.

In an article on the cultivation of this fruit which I forwarded you some months since, I then recommended that, in order to prevent the injury which the warm, sunny days in winter, or the alternation of heat and cold to which vines when trained upon our buildings are often subjected, they should be taken down late in the fall and laid along their whole length upon the ground—they will there ordinarily require no covering. The Isabella grape vines in our neighborhood have suffered greatly the past winter; large numbers are destitute of fruit; I have, on the contrary, two vines, one trained upon a fence, the other upon my barn, both having a southern exposure, that were laid down the past winter as recommended above, and they are loaded with fruit. It is not, I apprehend, the extreme cold days of winter so much as the alternation of heat and cold which produces the mischief. The sap of the grape vine, as said by Dr. Lindley, "is always in motion, at all seasons, and under all circumstances, except in the very coldest days." Can we wonder that, in a climate so variable, where the thermometer at night may descend to zero, and the next day an unclouded sun with the warmth of spring, a susceptible plant should be thus affected?

Salem, Mass., 1859. J. M. I.

HEIFER HOLDS UP HER MILK.

I have a two-year old heifer that calved about the middle of July; and lately she holds up her milk. Can you, or any of your readers, inform me if there is a remedy, and what it is?

Can you inform me where I can get some eggs of the Dominique breed? C. C. L.

Rockingham, Vt., Aug., 1859.

REMARKS.—Give the heifer a little meal, sweet grass or grain, when you milk her. Cannot tell you about the fowls.

THE CULTIVATION OF VINEYARDS.

Can you, or any of your readers, tell me where I can find full information relative to the methods practised in this country, in commencing and cultivating vineyards, the processes used in preparing wine for the market, expenses, &c.

New London, N. H., 1859.

REMARKS.—A work entitled "The Culture of the Grape, and Wine Making," by Robert Buchanan, tells the whole story in a compact form. For sale at this office—price 62½ cents.

TO CURE A KICKING COW.

Your correspondent "Cit" seems to ridicule my plan of curing kicking cows. For his benefit I will inform him that the rope is to surround the cow, as a girth is put on a horse, just behind the shoulders. He says he don't see how it can prevent her; that is not my fault. At all events, it has always cured mine, and will probably cure his, if they can be cured.

Boston, Aug., 1859. A BELMONT FARMER.

West Westminster, Vt., July 30, 1859.—The grass crop is very good in this vicinity, and oats look remarkably well; corn is just tasseling out, and if we do not have too early frosts, we shall get a fair crop. G. C.

For the New England Farmer.

THE WHEAT SEASON AT HAND.

MR. EDITOR:—The past season has probably been one of the most prolific ever known, in the development and securing of the cereal harvest. Our own great grain country proclaims it from every quarter, and all Europe echoes the welcome sound of overflowing granaries. This looks like cheap, home markets. On either side of the water a large surplus may remain, but it is that kind of farm product, that will keep without salt, and with very little care. It were wise in all farmers, that they always have six to twelve months stock in advance. This would be preparation against want, in the loss of a crop which so frequently occurs.

Now let us suppose abundance, cheapness, easily obtained, perhaps for this year only, (while the two following years may result in short crops and high prices,) would it be good policy for our New England farmers to relax their efforts, to stack their arms? Abundance is generally followed by reverse. We have been a suffering, panic-stricken people, when the "rich man" could not "glory in his riches;" when labor had not its reward; when the waxed ends were hung up to dry; when the mill, from trundle head to breast wheel, became noiseless, and silent as a cavern. Now, the village becomes dull, dim and dingy. The demand for farmers' hay, butter and eggs has ceased, but he has been reminded that "the flour is gone;" (sorry news for him, and he almost resolves to raise his own flour.) "Well," (he says,) "butter and eggs wont pay for a barrel of flour, I must broach the money laid away to pay taxes; it's like drawing teeth." Now, to provide against this kind of dentistry, if the farmers will put down two to five acres of wheat annually, his flour bills are easily paid. It would not be so much like "drawing teeth."

It is a well known fact, that four and a quarter bushels of wheat, is equal to a barrel of flour to every family. Every expense, from the plow to the granary, is the same as other grain crops. You can make it cost no more; more bushels of wheat can be grown to the acre than of rye, on a good strong soil, and an equal quantity on poor soil. Half of the rye lands scarcely pay expense of cultivation. Some of your rye fields are a burlesque on farming, yet followed up with great persistency, year after year.

Hilly or sloping lands are best for winter wheat. Clover fallow, old mowing or pasture sod, are better than old pulverized soil. In Maine, Vermont and New Hampshire, wheat should be sown last week in August. In Massachusetts, first week in September. Early sowing and two to three inches depth is sure against winter-kill. Late sowing is dangerous. Soak twelve hours in salt pickle to kill insects, (if any,) and skim off foul seed. Rake the seed in ashes; sow one and three-fourths to two bushels to the acre.

I have the satisfaction to learn from many farmers, that they have had complete success in raising winter wheat. Reliance on his farm ca-

pabilities, should stimulate him to the work. There are no obstacles to overcome, saving prejudice, or a long established supineness that has become a chronic disease.

It is now a good time to look over and see how many patches in the old mowing fields can be turned to profitable account. Once begun, we think your wheat crop will take the lead in the grain calendar. H. POOR.

Brooklyn, L. I., 1859.

For the New England Farmer.

MEASUREMENT OF LUMBER.

MR. EDITOR:—I have noticed in the *Farmer* several pieces relating to the incorrect measurement of *milk*. There is another subject allied to this, which concerns many farmers as deeply as this: I refer to the measurement of lumber.

Most farmers out of the vicinity of the city have hard-wood trees in their pastures or mowings which they wish removed. Accordingly, they cut them, have them sawed into plank, and sell them. Now, the miller saws both sides of the plank, and will have pay for all he saws; and it seems right that he should, but when we come to sell our plank, the measure falls short. The surveyor measures on the narrow side, allowing us only what the plank will square. Some thick plank fall short of the mill measure 20 per cent.

When we buy *beef*, we pay for the weight of the bones, or if there is a deduction, it is made in the price, not in the weight. So we should have pay for the whole of our lumber; if the wain lessens the value of the lumber, let the deduction be made in the price.

The surveyors profess to give us *board measure;* yet we know that a 4 inch plank, 8 inches wide on the narrow side, and 12 inches on the wide side, would measure a good deal more, if we should conceive it to be made into boards and then measured, than it will as they survey. Our laws respecting the measurement of lumber are very indefinite and loose. The legislature should attend to them. J. A. E.

Groton, Mass., July 30, 1859.

WHAT ARE FLOWERS GOOD FOR?—"I have said and written a great deal to my countrymen about the cultivation of flowers, ornamental gardening and rural embellishments; and I would read them a homily on the subject every day of every remaining year of my life, if I thought it would induce them to make this a matter of attention and care. When a man asks me what is the use of shrubs and flowers, my first impulse is always *to look under his hat and see the length of his ears.* I am heartily sick of measuring everything by a standard of mere utility and profit; and as heartily do I pity the men who can see no good in life but in the pecuniary gain, or in the mere animal indulgencies of eating and drinking."—*Coleman's Agricultural Tour.*

THE HORTICULTURIST.—The number for August is excellent. It has a fine engraving of the Nabours Pear. It has a long and capital article on the "Orchard House, or the Cultivation of Fruit Trees in Pots under Glass."

AUTUMNAL FARM WORK.

In a former article we mentioned two items of farm labor that ought to be attended to in the autumn, viz.: *seeding lands to grass* and *preparing rough lands for cultivation.* The next item to which we find pleasure in calling attention, and which, strictly, ought to precede all others, is that of

DRAINING.

And we beg of the reader not to come to the sudden conclusion that we make a hobby of this subject, but to give it thought, observation, and such careful investigation as his opportunites will permit. All of us have been taught to believe that manure is the great essential in farming; it is so; but thorough-draining follows close upon it in importance, and we are convinced that we cannot do any farmer a better service than by pressing upon him a sense of its great value. Judge FRENCH'S new work on *Farm Drainage* is finding its way into the farmhouses in every direction, and will be the means of adding large profits to the agricultural productions of New England.

It is not our intention now to give the details of the operation, as that has been pretty thoroughly done in these columns,—but we desire to call the attention of our readers to the subject, and ask them to consider it well. In the meantime, we advise every farmer to get French's Farm Drainage, or Waring's Elements of Agriculture, or both, and make them a study as they progress in the practical operation of the work. From the latter work, we give below some of the

ADVANTAGES OF UNDER-DRAINING.

1. It *prevents* drouth.
2. It furnishes an increased supply of atmospheric fertilizers.
3. It warms the lower portions of the soil.
4. It hastens the decomposition of roots and other organic matter.
5. It accelerates the disintegration of the mineral matters in the soil.
6. It causes a more even distribution of nutritious matters among those parts of the soil traversed by roots.
7. It improves the mechanical texture of the soil.
8. It causes the poisonous excrementitious matter of plants to be carried out of reach of their roots.
9. It prevents grasses from running out.
10. It enables us to deepen the surface soil—by removing excess of water.
11. It renders soils earlier in the spring.
12. It prevents the throwing out of grain in winter.
13. It allows us to work sooner after rains.

14. It keeps off the effects of cold weather longer in the fall.
15. It prevents the formation of *acetic* [that is, sour,—vinegar contains one or two ounces in a pound of acetic acid.—Ed.] and other acids, which induce the growth of sorrel and similar weeds.
16. It hastens the decay of vegetable matter, and the finer comminution of the earthy parts of the soil.
17. It prevents in a great measure, the evaporation of water, and the consequent abstraction of heat from the soil.
18. It admits fresh quantities of water from rains, &c., which are always more or less imbued with the fertilizing gases of the atmosphere, to be deposited among the absorbent parts of soil, and given up to the necessities of plants.
19. It prevents the formation of so hard a crust on the surface of the soil as is customary on heavy lands.

We will add another item to make out the score, and one of no less consequence than the most important he has named.

20. It prevents, in a great measure, grass and winter grains from being *winter-killed.*

In May last, upon an examination of their fields, farmers were astonished at the amount of their lands which they found bare, in consequence of the winter-killing of grass and grain. We are compelled to confess in fairness, that this destruction was caused by the coating of ice which covered the surface during most of the winter and a portion of March and April. But the question arises, "If the land had been thoroughly under-drained, would the ice have remained upon it so long, and clung to it, like the shirt of Nessus, until the breath of life was gone?" We think not—and look upon this as one of the chief merits of underdraining. But our story is getting long, for a single topic, and we must leave it to say a word upon the subject of

TOP-DRESSING GRASS LANDS.

The annual top-dressing of grass lands, or even doing it once in two years, will save a heavy item of cost in the matter of plowing and re-seeding. Quite moist lands may be kept in grass, yielding a ton or a ton and a half per acre, for fifty years in succession, if they are frequently top-dressed, and seed sometimes scattered with it, or if the grass is allowed to go to seed occasionally before it is cut.

It is an excellent time to apply composted manure as a top-dressing immediately after the hay is carried from the field, as the young grass will grow up and cover it in a few days. It then supplies the roots with new food, and gives them a vigorous setting for another crop.

If this work is not already done, it should be, before the grass ceases to grow, so that the autumnal rains shall moisten the manure and carry its fertilizing properties among the roots.

There are some other items which we should be glad to present, but our space for to-day is exhausted.

For the New England Farmer.

FARM WORK FOR AUGUST.

With most farmers, August is a month of comparative leisure, and often a portion of the help employed during the three months previous is dispensed with, as soon as haying and harvesting are done, as a matter of economy, at least for this month. But let Patrick and John remain; there is work enough that should be done on every ordinary farm to fill up profitably the time of this month. True, the demand for the hoe is not imperative now, among the growing crops, and if it was used with good effect at the proper time, perhaps its use now, to any great extent, is not advisable, unless the weeds have been remarkably obstinate. But in the fields and pastures, and meadows, and perhaps by the roadsides, there is a demand for labor that can better be done in this month than in any other, and with better effect.

Nothing looks more slovenly upon a farm than clumps of bushes growing here and there in the improved fields, or corners of fences; mulleins and yellow weeds by the side of the walls and edges of mowing lots, and hedges encroaching upon the adjoining fields, and the road-sides growing up to birches, alders, or other brushwood. Every day's work with a bush-scythe and axe in the highway adjoining your premises, where it is needed, will tell to the passer-by, more to your thrift than the publication in the newspapers of a premium for a fat hog, or nice steer.

I do not wish to deprive you of your accustomed respite in this month, but with an axe and bog-hoe upon your shoulder, lead the way, and at least tell what must be done, and see that it is done. Grub up the birches and alders and shrub-oaks; hitch the cattle to that bunch of willows that have taken root and shelter almost under the wall, and see if there isn't music in the snapping of the roots, when old Broad and Bright straighten the chain! Have the wall re-built where the frost threw it down last winter, if you have not already done it; and you, Farmer Loose-ends, will do well to clear the stone heaps from that mowing lot that the grass has been growing over these three seasons, and—Eh? "Haven't got time?" 'Twas only last week that, three times, smack went the point of your scythe into them, in one forenoon, and how you sweated after it because you hadn't got time—to stop and grind up! Last year, the boys might have got them off while they were hunting pigeons and woodcock, or fishing for trout and dace. with your assistance.

And the weeds and briers in the highway, or the by-roads over the farm, and along the fences,

should be mown, and, with the trash from the swales, see if they cannot be made to augment the compost heap very materially. By the way, just uproot those alder thickets along the brook that meanders through the meadow, before they seed the land any more; and then see if a week or ten days spent in this way does not pay—in the looks, and the satisfaction with which you can view your premises, as well as in the pocket.

Clear out the old ditches around your reclaimed meadow, and if you have rails to cut soon, cut them this month, and if it is hot weather, peal off the bark, and they will undoubtedly last much longer than if cut in any other month.

Farmer Fearful, just underdrain that piece of wet mowing land, or invest a little in reclaiming that alder swamp; cut wide ditches, and throw the muck to landward, for you will want it next winter. Cut up the brush by the roots, and make a fair beginning this seasan. Perchance there is gold in that meadow; certainly this peat is valuable, either in the barn-yard, hog-pen, or on your sandy fields. Persevere, and see if gold will not come out of it. J. A. A.

Springfield, Mass., August 8, 1859.

INTERESTING TO LOVERS OF PEACHES.—At a recent meeting of peach growers in Mercer county (says the Camden *West Jerseyman*,) it was ascertained that in a space of country about three miles square there would be at least 20,000 baskets of peaches for shipment. In this space there are over 92,000 trees planted, 22,000 of which are bearing. The peach crop in the upper part of Mercer county, and in Hunterdon, promises a large yield. Of late years the region formerly celebrated for this delicious fruit has been abandoned, it being found that peach orchards will succeed but once on the same ground—at least an interval of several years' cultivation with other crops is necessary before a second orchard can be expected to succeed.

LADIES' DEPARTMENT.

PICKLES.

Kettles lined with porcelain should always be used in preference to those of brass, copper or bell-metal. The verdigris produced by the vinegar on these metals is extremely poisonous.

For most kinds of pickles, cold vinegar is the best. By boiling, much of the strength is lost by evaporation—consequently, the pickles are more liable to spoil.

Those requiring hot vinegar poured over them, should remain uncovered until perfectly cold.

Pickles should be kept in either glass or stone jars, and closely covered to exclude the air, otherwise they soon become soft. A small piece of alum in each jar will make the pickles firm and crisp. One tablesponful of sugar to each quart of vinegar will be found a very great improvement to all pickles.

PICKLED CUCUMBERS.—Wash your cucumbers very clean; make a pickle of salt and water, sufficiently strong to float an egg, and pour it over them. Put a weight on the top of the vessel to keep the cucumbers under the brine, and let them stand nine days; then take them out and wash them in fresh water. Line the bottom of your kettle with green cabbage leaves, put in your pickles, and as much vinegar and water, mixed in equal quantities, as will cover them. Put a layer of cabbage leaves on the top. Hang them over a slow fire; let the water get hot, but do not allow them to simmer, as that would soften them. When they are perfectly green, take them out and let them drain. Wipe them dry, put them in jars with some allspice, cloves and a few small onions, or cloves, or garlic. A piece of alum in each jar will keep them firm. Cover your pickles with the best cider vinegar—tie them close and keep them in a cool, dry place. By adding one tablespoonful of sugar, it will be found a great improvement.

PICKLED PEACHES.—Throw your peaches, a few at a time, in hot lye; let them remain in it but two or three minutes, then put them in clear water, and wipe off all the down.

Make a strong brine, lay them in, and let them stand for two or three days. Take them out, wash and wipe them. Place them in jars, and cover with white wine vinegar and loaf sugar, in the proportion of one quart of vinegar to one pound of sugar. Put them in glass jars, cover close, and keep in a dry, cool place.

PICKLED TOMATOES.—Take a peck of tomatoes—the small ones are best—wash them, pierce each one with a fork, put them in a deep pan and sprinkle salt between each layer. Let them stand two days, then rinse them in clear water. Put them in stone jars, cover with vinegar and water in equal parts, and let them remain till next day. Allow one gill of mustard seed, half an ounce of cloves, half an ounce of pepper grains, half an ounce of whole allspice with two heads of garlic. Separate the garlic and take off the skins. Take the tomatoes out of the vinegar and water, empty the jars, put the pickles into them again, alternately with the spices, until the jars are three parts full. Then cover with cold vinegar, and cover close.

PICKLED GREEN TOMATOES.—Puncture the tomatoes with a fork, place them on a dish, and sprinkle with salt. Let them remain for two or three days, then rinse off the salt in clear water; put them in a preserving kettle, cover them with water, which keep scalding hot for one hour; then take them out, let them drain, and put them in jars.

Boil the vinegar, with some cloves, allspice, and stick cinnamon. When cold, pour over sufficient to cover them.—*Widdifield's Cook Book.*

OLD MAIDS.—Many of the satirical aspersions cast upon old maids tell more to their credit than is generally imagined. Is a woman remarkably neat in her person, "she will certainly die an old maid." Is she frugal in her expenses, and exact in her domestic concerns, "she is cut out for an old maid." And if she is kind and humane to the animals about her, nothing can save her from the appellation of "old maid." In short, we have always found that neatness, modesty, economy, and humanity, are the never-failing characteristics of an old maid.